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Mt Carmel Public Utility Co.

Customer Satisfaction Survey Final Report

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Opinion Dynamics

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1. Synopsis of the Executive Summaries

In 1998, under Illinois Administrative Code 411, "Electric Reliability," the Illinois Commerce Commission (ICC) adopted a customer survey requirement. The ICC initiated a rulemaking to design and approve a single customer survey, addressing both the residential and non-residential sectors, applicable to each Illinois Jurisdictional Entity. This Synopsis provides an overview of the results of the 2019 survey effort for Mt. Carmel Public Utility Co. The survey, which involved 152 residential customers and 42 non-residential customers, addressed the following topics as required by ICC rules: overall satisfaction; reliability performance; customer service performance; understanding of services; tree trimming performance; billing; and demographics/firmographics. The surveys were completed between September 23, 2019 and December 18, 2019. The residential portion has an overall confidence interval of ±4.2 percent at the 95 percent confidence level while the non-residential portion has an overall confidence interval of ±6.2 percent at the 95 percent confidence level. The survey consisted mostly of three question types: rating questions; yes/no questions; and categorical questions. Key findings from the 2019 study are summarized by sector and question type and significant differences from 2015 to 2019, from 2016 to 2019, from 2017 to 2019, and from 2018 to 2019 are outlined below where applicable.

Residential

Rating Questions. All rating questions use a zero to 10 scale where zero means the utility is doing a poor job and 10 means the utility is doing an excellent job. Overall research findings, ordered from highest to lowest mean rating, for questions asked of <u>all</u> residential survey respondents are outlined below:

- Providing electric service overall (mean = 8.91)
- Providing reliable electric service (mean = 8.89)
- Keeping the electric system in good working order (mean = 8.83)
- Restoring electric service at your residence when outages occur (mean = 8.75)
- Being accessible during an outage (mean = 8.56)
- Minimizing the number of power outages lasting MORE than one minute (mean = 8.50)
- Minimizing the number of power interruptions lasting LESS than one minute (mean = 8.19)
- Providing information about extended outages (mean = 7.99)
- Keeping electric rates reasonable (mean = 7.05)

Rating Questions – Significant Differences from Prior Years to 2019

- Being accessible during an outage is rated higher in 2019 than in 2018 (8.56 vs 8.01, respectively)
- Minimizing the number of power outages lasting MORE than one minute is rated higher in 2019 than in 2018 (8.50 vs 7.97, respectively)
- Minimizing the number of power interruptions lasting LESS than one minute is rated lower in 2019 than in 2016 (8.19 vs. 8.59, respectively)
- Keeping electric rates reasonable is rated higher in 2019 than in 2018 (7.05 vs 6.07, respectively)
- Providing information about extended outages is rated higher in 2019 than in 2018 (7.99 vs 7.12, respectively)

Yes/No Questions. Overall research findings, ordered from highest to lowest percentage of "yes" responses, for questions asked of all residential survey respondents are outlined below:

- Respondents who receive a bill from the utility at this location (percent "yes" = 97.4 percent)
- Respondents who tried to reach the utility by phone in the past 12 months (percent "yes" = 66.4 percent)
- Respondents who experienced any loss or damage due to electrical outages or other electrical problems (percent "yes" = 6.0 percent)

Yes/No Questions – Significant Differences from Prior Years to 2019

- The number of respondents who tried to reach the utility by phone was significantly higher in 2019 than 2017, 2016, and 2015 (66.4 percent versus 52.8, 48.1, and 56.9 percent, respectively)

Categorical Questions. While a number of categorical questions are included in the survey, those addressing familiarity with various utility services (ordered from most familiar to least familiar) are outlined below:

- Trimming trees to reduce the occurrence of power outages (percent "very familiar" = 75.5 percent)
- Being available 24 hours a day, 7 days a week by phone in the event of a power outage (percent "very familiar" = 75.5 percent)
- Offering different bill payment options to qualified customers (percent "very familiar" = 61.2 percent)
- Having a toll-free number to report power outages (percent "very familiar" = 51.0 percent)
- Reporting information about extended power outages to the news media to keep customers informed (percent "very familiar" = 34.5 percent)

Categorical Questions – Significant Differences from Prior Years to 2019

- In 2019, significantly more respondents said they are VERY FAMILIAR with the having a toll-free number to report power outages than in 2015 (51.0 percent vs. 39.2 percent, respectively)
- In 2019, significantly more respondents said there are VERY FAMILIAR with the utility being available 24 hours a day, 7 days a week by phone in the event of a power outage than in 2018, 2017, and 2016 (75.5 percent vs. 65.4, 65.9, and 65.6 percent, respectively)
- In 2019, significantly more respondents said that are VERY FAMILIAR with the utility offering different payment options to qualified customers than in 2015 (61.2 percent vs. 50.8 percent, respectively), while significantly fewer respondents said that they are NOT AT ALL FAMILIAR than in 2015 (13.2 percent vs 23.4 percent, respectively)
- In 2019, significantly fewer respondents said they are NOT AT ALL FAMILIAR with the utility trimming trees to reduce the occurrence of power outages than in 2017 and 2016 (6.0 percent vs. 12.6 and 13.4 percent, respectively)

Non-Residential

Rating Questions. All rating questions use a zero to 10 scale where zero means the utility is doing a poor job and 10 means the utility is doing an excellent job. Overall research findings, ordered from highest to lowest mean rating, for questions asked of all non-residential survey respondents are outlined below:

- Providing reliable electric service (mean = 9.43)
- Providing electric service overall (mean = 9.43)
- Keeping the electric system in good working order (mean = 9.40)
- Restoring electric service at your business when outages occur (mean= 9.28)
- Minimizing the number of power outages lasting MORE than one minute (mean = 9.18)
- Being accessible during an outage (mean = 9.13)
- Minimizing the number of power interruptions lasting LESS than one minute (mean = 9.06)
- Providing information about extended outages (mean = 8.97)
- Keeping electric rates reasonable (mean = 7.63)

Rating Questions – Significant Differences from Prior Years to 2019

- Providing electric service overall was rated significantly higher in 2019 than in 2017 and 2015 (9.43 vs 8.84 and 8.98, respectively)
- Minimizing the number of power outages lasting MORE than one minute was rated significantly higher in 2019 than in 2015 (9.18 vs 8.46, respectively)
- Providing information about extended outages was rated significantly higher in 2019 than in 2018 and 2015 (8.97 vs 7.98 and 7.9, respectively)

Yes/No Questions. Overall research findings, ordered from highest to lowest percentage of "yes" responses, for questions asked of <u>all</u> non-residential survey respondents are outlined below:

- Respondents who receive a bill from the utility at this location (percent "yes" = 82.9 percent)
- Respondents who tried to reach the utility by phone in the past 12 months (percent "yes" = 57.1 percent)
- Respondents who experienced any loss or damage due to electrical outages or other electrical problems (percent "yes" = 9.8 percent)

Yes/No Questions – Significant Differences from Prior Years to 2019

- No significant differences were observed.

Categorical Questions. While a number of categorical questions are included in the survey, those addressing familiarity with various utility services (ordered from most familiar to least familiar) are outlined below:

- Trimming trees to reduce the occurrence of power outages (percent "very familiar" = 71.4 percent)
- Being available 24 hours a day, 7 days a week by phone in the event of a power outage

(percent "very familiar" = 59.5 percent)

- Offering different bill payment options to qualified customers (percent "very familiar" = 57.1 percent)
- Reporting information about extended power outages to the news media to keep customers informed (percent "very familiar" = 41.5 percent)
- Having a toll-free number to report power outages (percent "very familiar" = 38.5 percent)

Categorical Questions – Significant Differences from Prior Years to 2019

- In 2019, significantly more respondents said they were NOT AT ALL FAMILIAR with the utility trimming trees to reduce the occurrence of power outages than in 2018 (14.3 percent vs. 2.2 percent, respectively)

2. Background

In 1997, the State of Illinois passed legislation on electric industry restructuring. Provisions were made to monitor electric service reliability, both operationally and via customer perception. In 1998, under the Illinois Administrative Code 411, "Electric Reliability," the Illinois Commerce Commission (ICC) adopted a customer survey requirement. The ICC initiated a rulemaking to design and approve a single customer survey applicable to each Illinois Jurisdictional Entity. The Illinois Jurisdictional Entities include Alliant Energy, AmerenCIPS, AmerenCILCO, AmerenIP, Commonwealth Edison, MidAmerican Energy Company, and Mt. Carmel Public Utility Co.

The Illinois Jurisdictional Entities joined forces and, through a competitive bidding process, selected Opinion Dynamics Corporation (ODC) to implement the study. ODC is a full-service, national market and public opinion research firm based in Waltham, Massachusetts, with satellite offices in California and Oregon.

Research was conducted to address both the residential and non-residential sectors. The research enables the individual Illinois Jurisdictional Entities to compare and contrast their survey results to past survey efforts (2015, 2016, 2017, and 2018). The research also provides the ICC with basic knowledge about consumer understanding of electric delivery services and pricing, consumer satisfaction with electric delivery services and reliability, and changes in consumer understanding and satisfaction.

3. Objectives

The ICC set a yearly requirement, starting in 2000, for each Illinois Jurisdictional Entity. The requirement reads as follows:

> *"Each jurisdictional entity is required to submit to the Commission an annual report that includes the results of a customer satisfaction survey. The customer satisfaction survey covers reliability of electric service, customer service, and customer understanding of the jurisdictional entity's services and prices."*[1]

The survey addresses the following topics as required by the ICC rules: overall satisfaction; reliability performance; customer service performance; understanding of services; tree trimming performance; billing; and demographics/firmographics.

The research objectives for the surveys are to provide the ICC with basic knowledge of Mt. Carmel Public Utility Co.'s residential and non-residential customers, particularly:

- Satisfaction with overall electric service, including reliability and rates, and recent outage experiences;
- Opinions of utility services including restoration of power, keeping the public informed, and being accessible;
- Familiarity with various utility services;
- Opinions of utility tree trimming efforts;
- Receipt, handling, and ease of use of Mt. Carmel Public Utility Co.'s billing statements; and
- Demographic (residential) and firmographic (non-residential) information.

[1] Illinois Administrative Code 411, "Electric Reliability," Section 411.300, Purpose of Subpart D.

4. Methodology

This research project consists of 152 residential telephone surveys and 42 non-residential telephone surveys with Mt. Carmel Public Utility Co.'s electric utility customers. The surveys, designed to address the research objectives outlined in Section III, were completed between September 23, 2019 and December 18, 2019. The survey and survey procedures for Mt. Carmel Public Utility Co. were identical to those used for the other Illinois Jurisdictional Entities.

ODC Interviewers. Interviewers were extensively trained to conduct the interviews effectively and efficiently while minimizing interviewer bias. The same individual trained interviewers were used throughout the 2019 survey in order to ensure consistency in conducting the interviews. However, the group of interviewers used in 2019 was not necessarily comprised of the same individuals as in 2018. 2017, 2016, or 2015.

Survey Respondents. For the residential population, the survey respondent was the person in the household who is most familiar with the household's electric service. For non-residential customers, the survey respondent was the person who is most familiar with electric service in the organization. Survey respondents were not offered any type of incentive to encourage them to participate.

Telephone Procedures. Before eliminating a customer and randomly selecting a replacement, ODC completed the following steps: 1) made a minimum of five telephone calls to each randomly selected customer; 2) attempted to reach the randomly selected customer at different times of the day; 3) called the customer back at the specified time if the customer answered the telephone but asked to respond to the survey at a different time; and 4) called back at a time the target respondent was expected to be at home or the office if the telephone was answered by anyone but the target respondent. Interviewers were not allowed to volunteer the name of Mt. Carmel Public Utility Co. or any other electricity provider during the course of the survey interview.

Survey Pre-Test. A pre-test of the survey instrument was completed with a total of 10 randomly selected residential respondents and 10 randomly selected non-residential respondents. Both residential and non-residential pre-test respondents were selected to include customers of the participating Illinois Jurisdictional Entities: Ameren Illinois, Commonwealth Edison, MidAmerican Energy Company, and Mt. Carmel Public Utility Co. The ODC research team closely monitored the pre-test effort and found survey respondents able to both understand and respond to each of the individual survey questions. As a result, no wording changes were proposed.

Sampling. In order to determine target survey respondents, Mt. Carmel Public Utility Co. staff pulled its entire residential and non-residential populations. Mt. Carmel Public Utility Co.'s 3636 residential accounts and 459 (with duplicate entries removed) non-residential accounts were then randomly sampled to produce the completed interviews.

Table 1 provides a complete breakdown of the sample used as part of this study. The residential portion of this study has an overall confidence interval of ±4.2 percent at the 95 percent confidence level while the non-residential portion has an overall confidence interval of ±6.2 percent at the 95 percent confidence level.

Independent Reviewer Statement. ODC staff have reviewed the procedures used by Mt. Carmel Public Utility Co. to select both their residential and non-residential samples. We believe the procedures used resulted in randomly drawn samples which are representative of the residential and non-residential customer population. We recommend that the same procedures be followed in the future for two important reasons. First, high response rates were achieved through this sampling procedure (see

Table 1). Second, consistent procedures will preserve the research team's ability to compare and contrast future and past results with these 2019 results.

Table 1. Survey Response Rate

	Residential Number of Sample Points	Percent of Residential Contacts	Non-Residential Number of Sample Points	Percent of Non-Residential Contacts
Starting Sample	3,636		459	
Sample Points Used	3,636		459	
Out-of-Sample	**2,532**		**268**	
Disconnected Number	848		0	
Business Number/800 Number	92		-	
Residential Number	--		2	
Computer Tone	5		1	
Language Problem	3		0	
Duplicate/Wrong Phone Number	278		116	
Privacy Line/Cell Phone	76		3	
Don't Know Utility Name/Don't Know Who to Speak to	2		0	
Mismatched Utility	9		1	
Wrong Address	24		20	
Work for Ad Agency, Research Firm, or Gas, Electric, or Phone Company/No Surveys	30		2	
No Answer/Answering Machine/Busy	1165		123	
Prospective Respondents Contacted	**1,113**		**191**	
Initial Refusal	859	77.2%	137	71.1%
Callbacks Scheduled	71	6.4%	9	4.7%
Mid-Interview Terminates	31	2.8%	3	1.6%
Survey Completions	**152**	**13.7%**	**42**	**22.0%**

5. Residential Executive Summary

This section of the report is divided into seven major subsections that present the findings of the 152 telephone surveys conducted with Mt. Carmel Public Utility Co.'s residential customers. The subsections are in the order they appear in the survey instrument (see Appendix A).

- Subsection "5.1" provides ratings of the utility's overall electric service, their ability to provide reliable service, and their performance on keeping electric rates reasonable.
- Subsection "5.2" discusses Mt. Carmel Public Utility Co.'s reliability in detail including the length and timing of recent outages.
- Subsection "5.3" presents residential customer opinions of utility services including restoration of power, keeping the public informed, and being accessible.
- Subsection "5.4" discusses residential respondents' familiarity with various utility services.
- Subsection "5.5" presents customer opinions of utility tree trimming efforts.
- Subsection "5.6" discusses the receipt, handling, and ease of use of Mt. Carmel Public Utility Co.'s billing statements.
- Finally, subsection "5.7" presents respondent demographic information including age, home ownership status, income, people living in household, and gender.

All survey questions asked of residential respondents are discussed within this Residential Executive Summary. There are three types of questions contained in the survey: rating questions, yes/no questions, and categorical questions. In each of the seven subsections that follow, overall question results from the 2019 study are either discussed or graphically presented and then significant findings for those questions are outlined. In addition, overall question results from the prior studies are graphically presented and significant differences between 2019 and prior results are outlined.

Rating Questions. All rating questions use a zero to 10 scale, where zero means the utility is doing a poor job and 10 means the utility is doing an excellent job. As required in Illinois Administrative Code 411.350, all rating questions underwent two broad statistical tests—Pearson Product Moment Correlation and Chi-Square.

- ***Pearson Product Moment Correlation Coefficients*** – Significant relationships between a particular rating question and all other rating questions were determined through the use of the Pearson Product Moment Correlation Coefficient. Only those rating question combinations that resulted in a correlation coefficient with an absolute value of 0.5 or higher are discussed within this Executive Summary.
- ***Chi-Square*** – Significant relationships between a particular rating question and all yes/no, categorical, and demographic questions were determined through the use of the Chi-Square test. Only those Chi-Squares with a significance of 0.05 or less are discussed within this Executive Summary.

- *Independent T-test for Means* – Upon finding a significant Chi-Square, the research team utilized a standard independent t-test for means in order to provide further insight into the nature or direction of the relationship between a rating question and a yes/no, categorical, or demographic question. This additional testing is not required as a part of the ICC rules, but is provided to give the reader further insight into the data without being unduly burdensome. When reviewing the t-test results, the research team looked for a "general pattern of response" rather than statistical significance within every dimension of the cross-tabulation table. For instances where the t-test resulted in no statistically significant differences or consistent/logical pattern across segment means, the relationship between the two cross-tabbed variables is described as having "no general pattern of response." Otherwise, the direction of the relationship is indicated.

Yes/No and Categorical Questions. As required in Illinois Administrative Code 411.350, all yes/no and categorical questions underwent a single statistical test—Chi-Square.

- *Chi-Square* – Significant relationships between a particular yes/no or categorical question and all demographic questions were determined through the use of the Chi-Square test. Only those Chi-Squares with a significance of 0.05 or less are discussed within this Executive Summary.
- *Independent Z-test for Percentages* – Upon finding a significant Chi-Square, the research team utilized a standard independent z-test for percentages in order to provide further insight into the nature or direction of the relationship between the yes/no or categorical question and a demographic question. This additional testing is not required as a part of the ICC rules, but is provided to give the reader further insight into the data without being unduly burdensome. When reviewing the z-test results, the research team looked for a "general pattern of response" rather than statistical significance within every dimension of the cross-tabulation table. For instances where the z-test resulted in no statistically significant differences or consistent/logical pattern across segment proportions, the relationship between the two cross-tabbed variables is described as having "no general pattern of response." Otherwise, the direction of the relationship is indicated.

Significant Differences from 2019 to prior results. As required in Illinois Administrative Code 411.355, all responses from the current year (2019) were compared to historical study responses (2015, 2016, 2017, and 2018). To determine significant relationships, two statistical tests were performed—independent t-test for means and independent z-test for proportions. Consistent with the overall analysis plan, only significant differences between 2019 and prior results are discussed. It is important to note that this report highlights all 2019 versus prior year comparisons where "statistically" significant differences are found. While many of these differences may not be large enough to be "meaningful" or "substantive" we, nevertheless, report them. The research team decided not to select a "substantive" significance level (which refers to an absolute difference between 2019 and prior results that must be achieved before a change is considered meaningful) because, while there is precedent for such a choice in customer satisfaction literature, setting a "substantive" significance level is fundamentally a subjective process. In order to keep the process completely objective, we have reported on all "statistically" significant differences. However, some of the "statistical" differences highlighted in this report (with respect to 2019 versus prior year comparisons) may not be meaningful because the absolute difference is small.

- *Independent T-test for Means* – Significant relationships between 2019 and prior results for all rating questions were determined through the use of a standard independent t-test for means.

- ***Independent Z-test for Percentages*** – Significant relationships between 2019 and prior results for all yes/no and categorical questions were determined through the use of a standard independent z-test for percentages.

An explanation of the tables contained in the appendices (Chi-Square tables, and t-test/z-test tables) and the statistical tests used in this study (correlation coefficients, Chi-Square tests, t-tests, and z-tests) are located in Appendix B. Correlation coefficients of all residential rating questions by all other rating questions are located in Appendix C. Required cross tabulations and t-test/z-test tables for all residential survey questions are available in electronic format (file names: Appendix D – Mt Carmel Residential Chi Square.doc and Appendix D – Mt Carmel Residential Z test & T test.doc, respectively) while a chart of question combinations with significant Chi-Squares is located in Appendix D. Required cross tabulations comparing 2019 with prior results for all residential survey questions are also available in electronic format (file name: Appendix F – Mt Carmel Residential Comparison 2015-2019.doc).

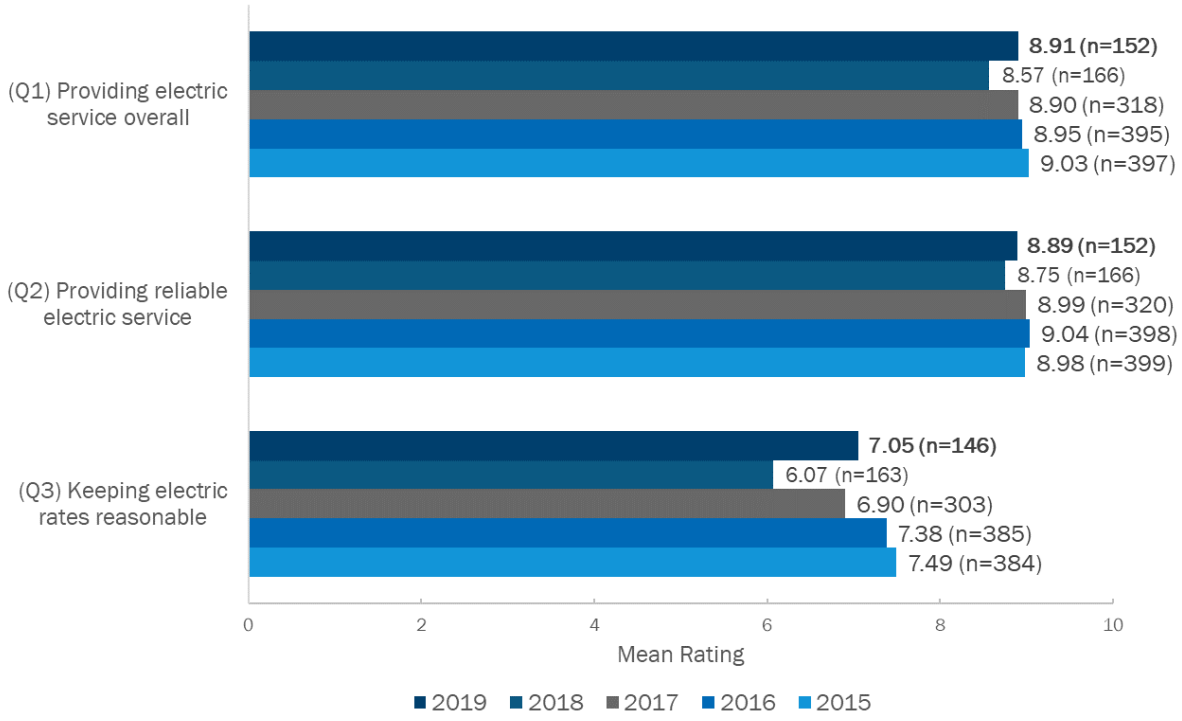
5.1 Overall Satisfaction

We asked survey respondents to rate the job Mt. Carmel Public Utility Co. does on providing electric service overall. In addition, we asked respondents to rate the reliability of electric service they receive and to rate how well Mt. Carmel Public Utility Co. keeps their electric rates reasonable. Key findings are summarized below.

Overall Findings: Q1, Q2, and Q3

On average, respondents give Mt. Carmel Public Utility Co. a rating of 8.91 for providing electric service overall. In addition, respondents give the utility an average rating of 8.89 for providing reliable electric service while they give the utility an average rating of 7.05 for keeping electric rates reasonable (See Figure 1).

Figure 1. **Mean Ratings for Overall Satisfaction**



<u>Significant Differences – Prior Years to 2019</u>

- **Keeping electric rates reasonable (Q3) is rated significantly higher in 2019 than in 2018.**

<u>Significant Chi-Squares –2019</u>

Providing electric service overall (Q1) is rated higher by respondents who:

- Have not experienced damage due to an electrical outage/problem (Q13); and
- Said they are VERY FAMILIAR with Mt. Carmel offering different bill payment options to its customers (Q25).

In addition, ratings for providing electric service (Q1) vary significantly by:

- The last time a customer experienced an outage lasting more than one minute (Q9). However, no clear pattern of response can be determined from the data;
- Customer familiarity with Mt. Carmel's 24/7 phone support in the event of power outages (Q23). However, no clear pattern of response can be determined from the data; and
- Customer familiarity with Mt. Carmel trimming trees to reduce the occurrence of outages (Q26). However, no clear pattern of response can be determined from the data.

Providing reliable electric service (Q2) is rated higher by respondents who:

- Have not experienced damage due to an electrical outage/problem (Q13).

In addition, providing reliable electric service overall (Q2) varies significantly by:

- The number of power outages lasting more than one minute (Q8). However, no clear pattern of response can be determined from the data;
- The last time a customer experienced an outage lasting more than one minute (Q9). However, no clear pattern of response can be determined from the data;
- Customers who have tried to reach Mt. Carmel by phone (Q18). However, no clear pattern of response can be determined from the data;
- Customer familiarity with Mt. Carmel offering different bill payment options to qualified customers, such as paying a fixed monthly amount (Q25). However, no clear pattern of response can be determined from the data; and
- Customer familiarity with tree trimming efforts used to reduce the occurrence of outages (Q26). However, no clear pattern of response can be determined from the data.

Keeping electric rates reasonable (Q3) is rated higher by respondents who:

- Have not experienced damage due to an electrical outage/problem (Q13).

In addition, ratings for keeping electric rates reasonable (Q3) varies significantly by:

- The number of power outages lasting more than one minute (Q8). However, no clear pattern of response can be determined from the data;
- The method used to complete most recent call to the utility (Q20). However, no clear pattern of response can be determined from the data;
- Customer familiarity with Mt. Carmel offering different bill payment options to qualified customers, such as paying a fixed monthly amount (Q25). However, no clear pattern of response can be determined from the data;
- Customer age (Q33). However, no clear pattern of response can be determined from the data; and
- Whether a customer owns or rents their residence (Q34). However, no clear pattern of response can be determined from the data.

Significant Correlation Coefficients –2019

Providing electric service overall (Q1) significantly correlates with:

- Providing reliable electric service (Q2);
- Keeping your electric rates reasonable (Q3);

- Keeping the electric system, including power lines and equipment, in good working order (Q4);
- Minimizing the number of power outages lasting MORE than one minute (Q7);
- Restoring electric service at your residence when outages occur (Q15);
- Being accessible during an outage (Q17); and
- Meeting the customers' needs during the most recent phone call (Q21).

Providing reliable electric service (Q2) significantly correlates with:

- Providing electric service overall (Q1);
- Keeping your electric rates reasonable (Q3);
- Keeping the electric system, including power lines and equipment, in good working order (Q4);
- Minimizing the number of power outages lasting MORE than one minute (Q7);
- Restoring electric service at your residence when outages occur (Q15);
- Being accessible during an outage (Q17); and
- Meeting the customers' needs during the most recent phone call (Q21).
-

Keeping electric rates reasonable (Q3) significantly correlates with:

- Providing electric service overall (Q1);
- Providing reliable electric service (Q2);
- Restoring electric service at your residence when outages occur (Q15); and
- Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27).

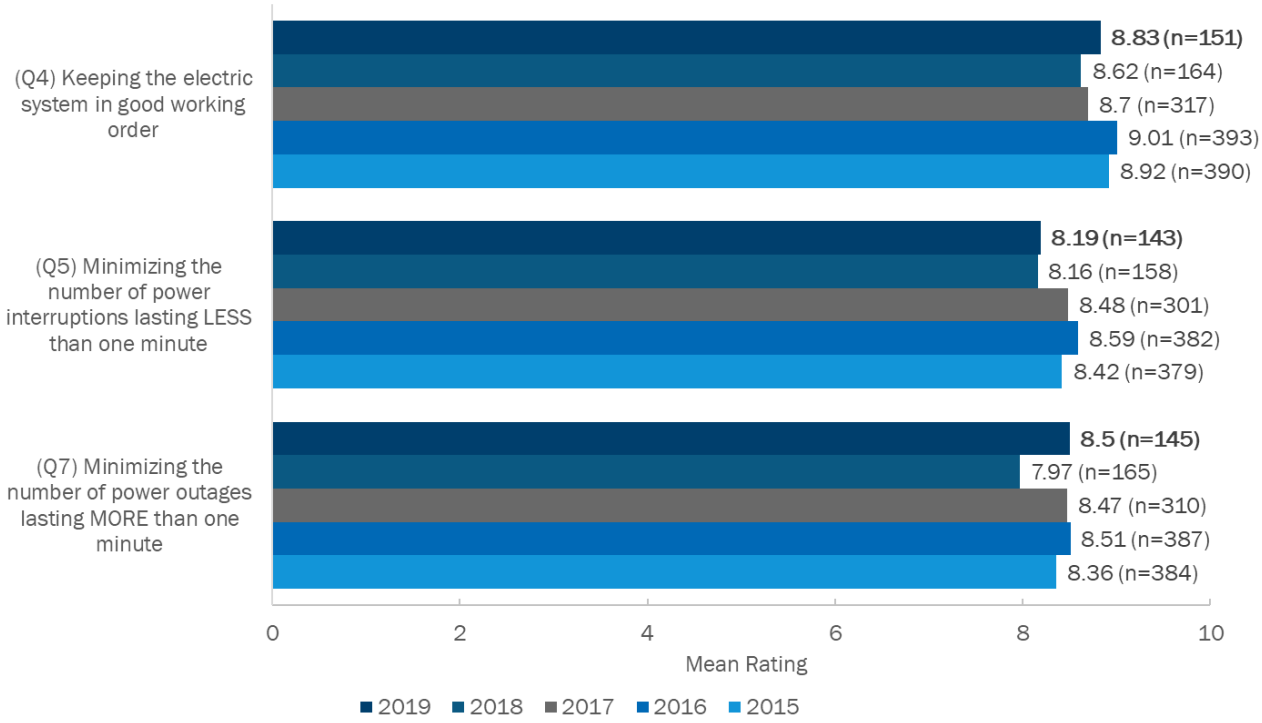
5.2 Reliability Performance

Respondents were asked to rate Mt. Carmel Public Utility Co.'s performance on electric reliability. In addition, respondents were asked for the number of power interruptions lasting less than and more than one minute they have experienced in the past 12 months and how long these power interruptions lasted. Key findings are summarized below.

Overall Findings: Q4, Q5, and Q7

Respondents give Mt. Carmel Public Utility Co. a mean rating of 8.83 for keeping the electric system in good working order. In addition, respondents give the utility a mean rating of 8.19 for minimizing the number of power outages lasting LESS than one minute while they give the utility a mean rating of 8.5 for minimizing the number of power interruptions lasting MORE than one minute (See Figure 2).

Figure 2. **Mean Ratings for Reliability Performance**



<u>Significant Differences – Prior Years to 2019</u>

- **Minimizing the number of power interruptions lasting LESS than one minute (Q5) is rated significantly lower in 2019 than in 2016.**
- **Minimizing the number of power outages lasting MORE than one minute (Q7) is rated significantly higher in 2019 than in 2018.**

<u>Significant Chi-Squares –2019</u>

Keeping the electric system in good working order (Q4) is rated higher by respondents who:

- Have experienced LESS THAN TWO power outages lasting more than one minute (Q8);

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13);
- Said they are VERY FAMILIAR with the utility offering different bill payment options to qualified customers (Q25); and
- Said they are VERY FAMILIAR with the utility trimming trees to reduce the occurrence of power outages (Q26).

In addition, keeping the electric system in good working order (Q4) varies significantly by:

- The length in hours of the SHORTEST outage lasting more than one minute (Q11). However, no clear pattern of response can be determined from the data; and
- The length in hours of the LONGEST outage lasting more than one minute (Q12). However, no clear pattern of response can be determined from the data.

Minimizing the number of power interruptions lasting less than one minute (Q5) varies significantly by:

- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern of response can be determined from the data;
- Whether or not a customer has experienced damage due to an electrical outage or other electrical problem in the last 12 months (Q13). However, no clear pattern of response can be determined from the data;
- Respondent familiarity with the utility offering different bill payment options to qualified customers, such as paying a fixed monthly amount (Q25). However, no clear pattern of response can be determined from the data; and
- Number of people (including the customer) who live in the customer's household (Q37) However, no clear pattern of response can be determined from the data.

Minimizing the number of power outages lasting more than one minute (Q7) is rated higher by respondents who:

- Have experienced less than two power outages lasting more than one minute in the past 12 months (Q8);
- Said they are VERY FAMILIAR with Mt. Carmel being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23);
- Said they are VERY FAMILIAR with Mt. Carmel offering different bill payment options to qualified customers (Q25);
- Said they are VERY FAMILIAR with Mt. Carmel trimming trees to reduce the occurrence of power outages (Q26); and
- Said they own or are buying their residence (Q34).

In addition, ratings for minimizing the number of power outages lasting more than one minute (Q7) varies significantly by:

- The number power interruptions lasting less than one minute in the past 12 months (Q6). However, no clear pattern of response can be determined from the data; and
- Household income (Q36). However, no clear pattern of response can be determined from the data.

Significant Correlation Coefficients – 2019

Keeping the electric system, including power lines and equipment, in good working order (Q4) significantly correlates with:

- Providing electric service overall (Q1);
- Providing reliable electric service (Q2);
- Minimizing the number of power outages lasting MORE than one minute (Q7);
- Restoring electric service at your residence when outages occur (Q15);
- Providing information about extended outages (Q16);
- Being accessible during an outage (Q17); and
- Meeting the customers' needs during the most recent phone call (Q21).

Minimizing the number of power interruptions lasting LESS than one minute (Q5) significantly correlates with:

- Minimizing the number of power outages lasting MORE than one minute (Q7).

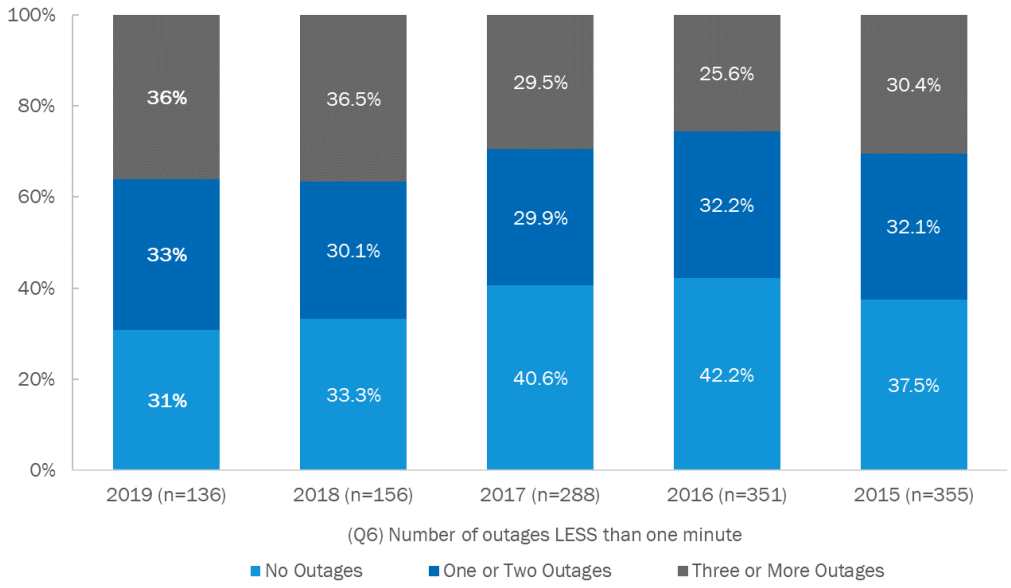
Minimizing the number of power outages lasting MORE than one minute (Q7) significantly correlates with:

- Providing electric service overall (Q1);
- Providing reliable electric service (Q2);
- Keeping the electric system, including power lines and equipment, in good working order (Q4);
- Minimizing the number of power interruptions lasting LESS than one minute (Q5);
- Providing information about extended outages (Q16); and
- Being accessible during an outage (Q17).

Overall Findings: Q6 and Q8

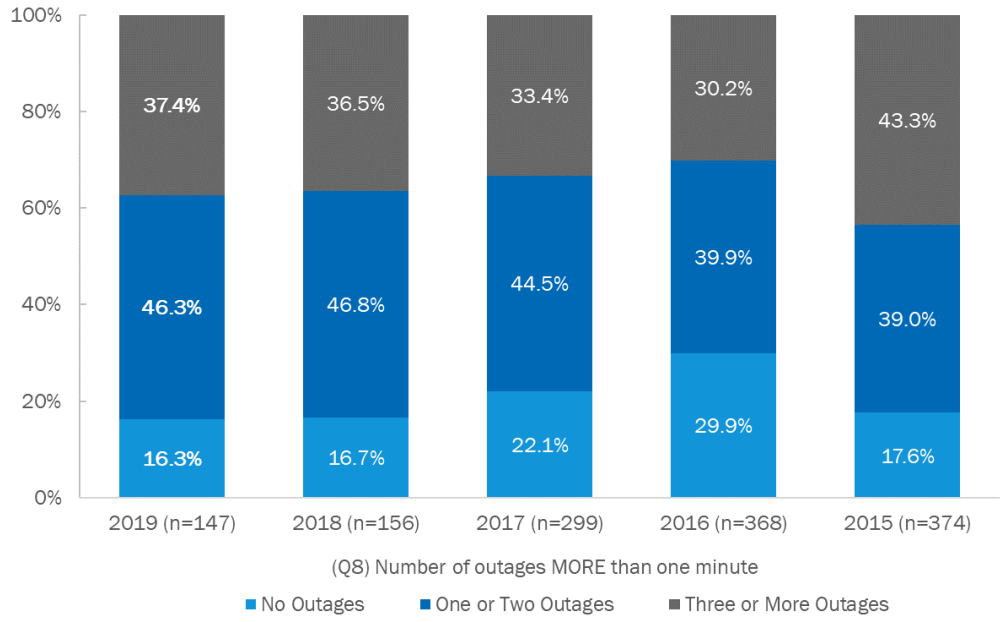
In the past 12 months, 31 percent of respondents said they have experienced no power interruptions lasting LESS than one minute. Thirty-three percent said they have experienced one or two and 36 percent said they have experienced three or more outages lasting LESS than one minute (See Figure 3).

Figure 3. Number of Outages (LESS than one minute)



In the past 12 months, 16 percent of respondents said they have experienced no power outages lasting MORE than one minute. Forty-six percent said they have experienced one or two while 37 percent said they have experienced three or more outages lasting MORE than one minute (See Figure 4).

Figure 4. Number of Outages (MORE than one minute)



<u>Significant Differences – Prior Years to 2019</u>

- In 2019, significantly more respondents than in 2016 said they have experienced 3 or more power interruptions lasting LESS than one minute in the past 12 months, while **significantly fewer respondents than in 2016 and 2017 said they have experienced zero power interruptions lasting LESS than one minute in the past 12 months (Q6).**
- **In 2019, significantly fewer respondents than in 2016 said they have experienced zero power outages lasting MORE than one minute in the past 12 months (Q8).**

<u>Significant Chi-Squares – 2019</u>

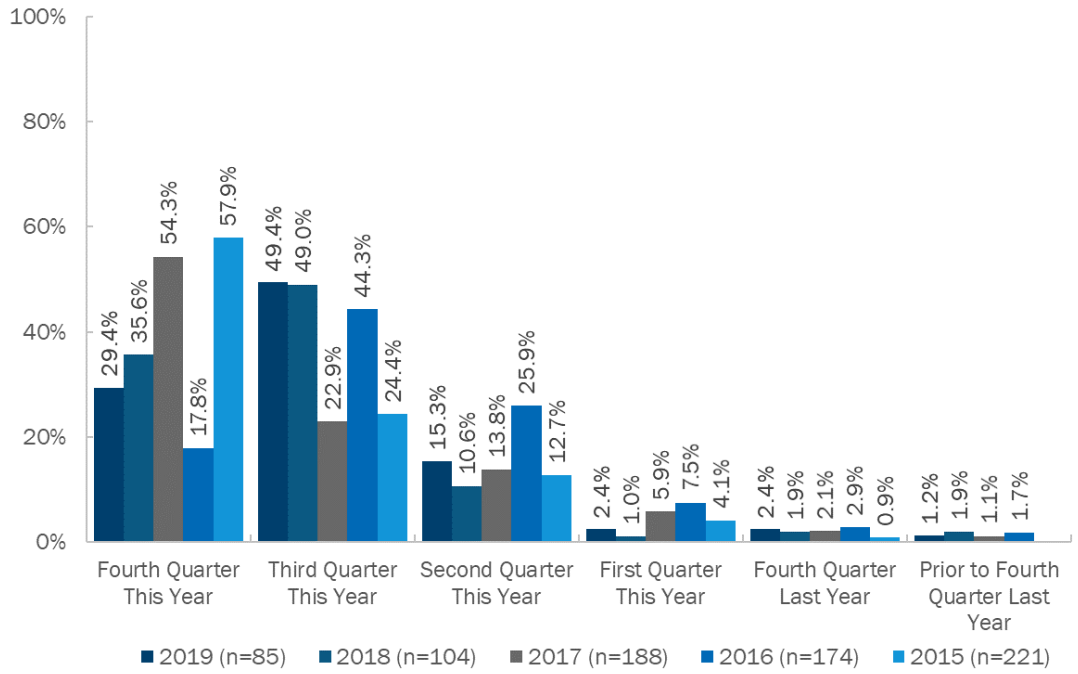
A respondent's number of power interruptions lasting less than one minute in the last 12 months (Q6) varies significantly by:

- How long a resident has lived at their current residence (Q35). However, no clear pattern of response can be determined from the data; and
- The number of occupants in the respondent's household (Q37). However, no clear pattern of response can be determined from the data.

Overall Findings: Q9

Of those respondents who have experienced an outage lasting MORE than one minute in the past 12 months, 29 percent said the most recent outage occurred during the fourth quarter of 2018. See Figure 5 below for a complete breakdown of when respondents said their last outage lasting MORE than one minute occurred.

Figure 5. Most Recent Outage



Significant Differences – Prior Years to 2019

- **In 2019, significantly more respondents than in 2016 report experiencing their most recent outage lasting MORE than one minute (Q9) in the fourth quarter of this year, while significantly fewer respondents than in 2015 and 2017 report experiencing their most recent outage lasting MORE than one minute (Q9) in the fourth quarter of this year.**
- **In 2019, significantly more respondents than in 2015 and 2017 report experiencing their most recent outage lasting MORE than one minute (Q9) in the third quarter of this year.**
- **In 2019, significantly fewer respondents than in 2016 report experiencing their most recent outage lasting MORE than one minute (Q9) in the second quarter of this year.**
- **In 2019, significantly fewer respondents than in 2016 report experiencing their most recent outage lasting MORE than one minute (Q9) in the first quarter of this year.**

Significant Chi-Squares – 2019

- No significant chi-squares were observed.

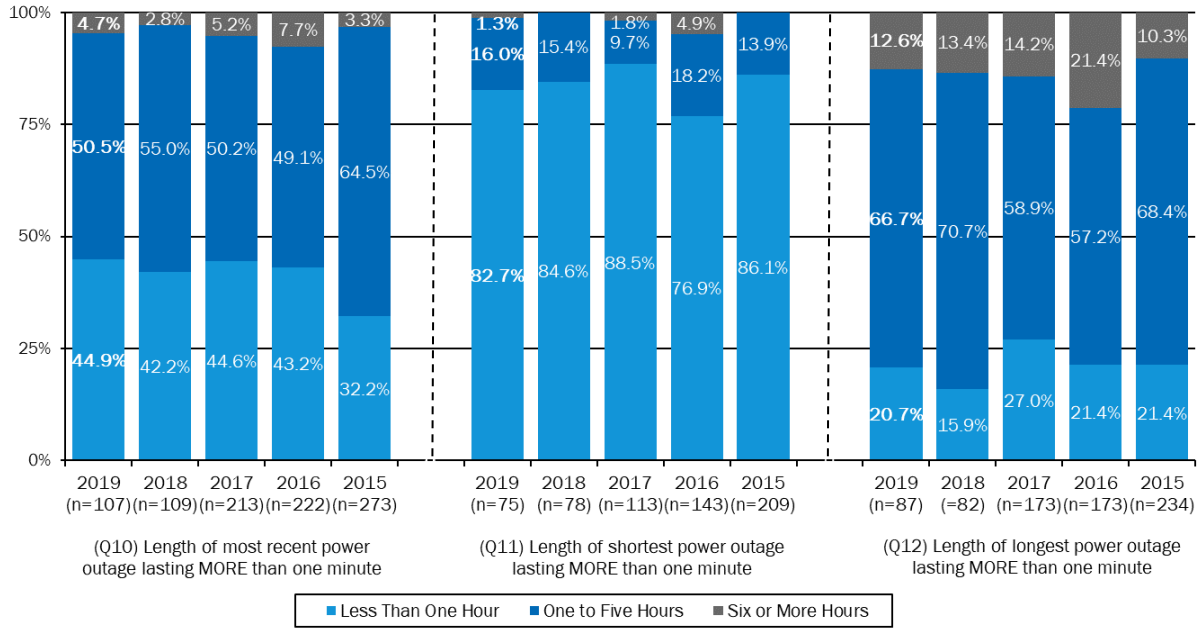
Overall Findings: Q10, Q11, and Q12

Fifty-one percent of respondents who experienced a power outage lasting MORE than one minute during the past 12 months (Q10) said the MOST RECENT power outage lasted for one to five hours. See Figure 6 **Error! Reference source not found.** for a complete breakdown of respondents who experienced a power outage lasting MORE than one minute in the past 12 months.

Eighty-three percent of respondents who experienced more than one outage lasting MORE than one minute during the past 12 months (Q11) said the SHORTEST of these outages lasted less than one hour. See Figure 6 **Error! Reference source not found.** for a complete breakdown of the shortest outages respondents experienced lasting MORE than one minute in the past 12 months.

Sixty-seven percent of respondents who experienced more than one outage lasting MORE than one minute (Q12) during the past 12 months said the LONGEST of these outages lasted for one to five hours. See Figure 6 **Error! Reference source not found.** for a complete breakdown of the longest outages respondents experienced lasting MORE than one minute in the past 12 months.

Figure 6. Length of Outages[1]



[1] Only those respondents who said they experienced an outage lasting MORE than one minute in the last 12 months were asked for the length of their most recent power outage. Only those respondents who said they experienced more than one outage lasting MORE than one minute in the last 12 months were asked for the length of the shortest and longest of these outages.

Significant Differences – Prior Years to 2019

- In 2019, significantly more respondents than in 2015 said their most recent power outage during the past 12 months lasting MORE than one minute (Q10) was less than one hour.
- In 2019, significantly fewer respondents than in 2015 said their most recent power outage during the past 12 months lasting MORE than one minute (Q10) was one to five hours.
- No significant differences were observed for (Q11).
- No significant differences were observed for (Q12).

Significant Chi-Squares – 2019

The length of a respondent's most recent power outage lasting more than one minute in the past 12 months (Q10) varies significantly by:

- Whether a respondent owns or rents their residence (Q34). However, no clear pattern of response can be determined from the data.

The length of a respondent's shortest outage lasting more than one minute in the past 12 months (Q11) varies significantly by:

- How long a respondent has lived at their current residence (Q35). However, no clear pattern of response can be determined from the data.

The length of a respondent's longest outage lasting more than one minute in the past 12 months (Q12) varies significantly by:

- Respondent's gender (Q40). However, no clear pattern of response can be determined from the data.

Overall Findings: Q13 and Q14

In the past 12 months, six percent of all residential respondents said they experienced a loss or damage due to electrical outages or other electrical problems. Eighty-nine percent of these respondents experienced a loss of electrical equipment or accessories. Eleven percent said they experienced another kind of damage or loss (See Table 2).

Table 2. Loss or Damage Suffered due to Electric Outages or Related Problems

(Q14) Loss or Damage Suffered	Percent of Respondents[1]				
	2019	2018	2017	2016	2015
Loss of electrical equipment or accessories	88.9%	83.3%	41.7%	78.6%	91.7%
Loss of perishables	--	--	16.7%	21.4%	8.3%
Interruption of business	--	--	--	7.1%	--
Injury to self or another person	--	--	--	--	8.3%
Other	11.1%	33.3%	41.7%	21.4%	8.3%%
(n)	9	6	12	14	12

[1] Respondents were permitted to mention more than one type of loss or damage suffered. Only those respondents who said they suffered a loss or damage due to an electrical outage or related problem were asked this question.

Significant Differences – Prior Years to 2019

- **In 2019, respondents are significantly more likely than in 2017 to report suffering a loss of electrical equipment or accessories (Q14).**

Significant Chi-Squares – 2019

- No significant chi squares were identified.

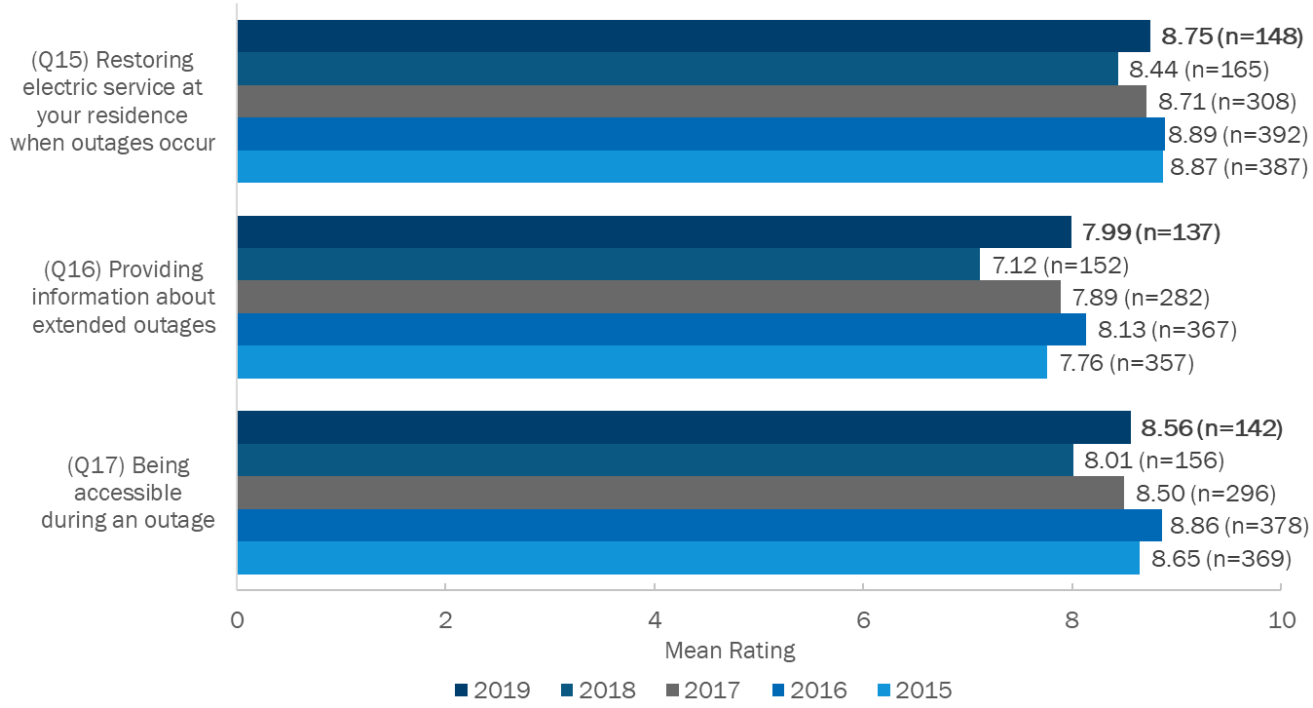
5.3 Customer Service Performance

In this subsection we discuss the utility's performance on customer service-related items including the restoration of power, accessibility during outages, providing information about outages, and meeting customers' needs during service calls.

Overall Findings: Q15, Q16, and Q17

Respondents give Mt. Carmel Public Utility Co. a mean rating of 8.75 for restoring electric service at their residence when outages occur. In addition, respondents give Mt. Carmel Public Utility Co. a mean rating of 8.56 for being accessible during an outage while they give the utility a mean rating of 7.99 for providing information about extended outages (See Figure 7).

Figure 7. Mean Ratings for Customer Service Performance



Significant Differences – Prior Years to 2019

- **Providing information about extended outages (Q16) is rated significantly higher in 2019 than in 2018.**
- **Being accessible during an outage (Q17) is rated significantly higher in 2019 than in 2018.**

Significant Chi-Squares – 2019

Restoring electric service at your residence when outages occur (Q15) is rated higher by respondents who:

- Report experiencing less than two power outages lasting MORE than one minute in the past 12 months (Q8);
- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13); and

- Said they are VERY FAMILIAR with the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23).

In addition, ratings for restoring electric service at your residence when outages occur (Q15) vary significantly by:

- The timing (month and day) of the most recent outage lasting MORE than one minute in the past 12 months (Q9). However, no clear pattern can be determined from the data;
- Respondent familiarity with the utility having a toll-free number to report power outages (Q22). However, no clear pattern can be determined from the data; and
- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern can be determined from the data;

Providing information about extended outages (Q16) is rated higher by respondents who:

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13);
- Said they are VERY FAMILIAR with the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23); and
- Said they are VERY FAMILIAR with the utility reporting information about extended power outages to the news media to keep customers informed (Q24).

In addition, ratings for providing information about extended outages (Q16) vary significantly with:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6). However, no clear pattern can be determined from the data;
- The number of power outages lasting MORE than one minute in the past 12 months (Q8). However, no clear pattern can be determined from the data;
- The length in hours of the SHORTEST outage lasting more than one minute (Q11);
- The method used to complete the most recent call to the utility (Q20). However, no clear pattern can be determined from the data;
- Familiarity with the utility offering different bill payment options to qualified customers (Q25). However, no clear pattern can be determined from the data; and
- Whether or not the respondent personally sees or handles their utility bill (Q31). However, no clear pattern can be determined from the data.

Being accessible during an outage (Q17) is rated higher by respondents who:

- Said they are VERY FAMILIAR with the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23).

In addition, ratings for being accessible during an outage (Q17) vary significantly with:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6). However, no clear pattern can be determined from the data;
- The number of power outages lasting MORE than one minute in the past 12 months (Q8). However, no clear pattern can be determined from the data;
- The length in hours of the SHORTEST outage lasting more than one minute (Q11). However, no clear pattern can be determined from the data; and

- Familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern can be determined from the data.

Significant Correlation Coefficients – 2019

Restoring electric service at your residence when outages occur (Q15) significantly correlates with:

- Providing electric service overall (Q1);
- Providing reliable electric service (Q2);
- Keeping your electric rates reasonable (Q3); and
- Keeping the electric system, including power lines and equipment, in good working order (Q4).

Providing information about extended outages (Q16) significantly correlates with:

- Keeping the electric system, including power lines and equipment, in good working order (Q4);
- Minimizing the number of power outages lasting MORE than one minute (Q7);
- Being accessible during an outage (Q17); and
- Meeting the customers' needs during the most recent phone call (Q21).

Being accessible during an outage (Q17) significantly correlates with:

- Providing electric service overall (Q1);
- Providing reliable electric service (Q2);
- Keeping the electric system, including power lines and equipment, in good working order (Q4);
- Minimizing the number of power outages lasting MORE than one minute (Q7); and
- Providing information about extended outages (Q16).

Overall Findings: Q18 and Q19

Sixty-six percent of all residential respondents said they tried to reach Mt. Carmel Public Utility Co. by phone in the past 12 months. Fifty-eight percent of these respondents called the utility to report a power problem such as an outage or a downed wire. See Table 3 below for a complete breakdown of the reasons respondents cited for their most recent call to the utility.

Table 3. Reason for Making Most Recent Call to the Utility

(Q19) Reason for Most Recent Call	Percent of Respondents[1]				
	2019	2018	2017	2016	2015
Report a power problem, outage, or downed wire	58.3%	62.6%	59.5%	62.0%	71.1%
Make a payment arrangement or other billing question	22.9%	23.1%	24.4%	25.1%	19.3%
Stop, start, or transfer service	6.2%	1.1%	4.8%	2.7%	4.1%
Get information about locations, programs, or services	3.1%	3.3%	2.4%	2.1%	0.9%
Other	9.4%	9.9%	8.9%	8.0%	4.6%
(n)	96	91	168	187	281

[1] Only those respondents who said they called the utility in the past 12 months were asked this question.

Significant Differences – Prior Years to 2019

- **In 2019, significantly more respondents than in 2015, 2016, and 2017 tried to reach the utility by phone in the past 12 months, while significantly fewer respondents than in 2015, 2016, and 2017 did not try to reach the utility by phone in the past 12 months (Q18).**
- **In 2019, respondents are significantly less likely than in 2015 to say they made their most recent call to the utility (Q19) to report a power problem, outage, or downed wire.**

Significant Chi-Squares – 2019

The likelihood of respondents to try to reach the utility by phone (Q18) varies significantly by:

- Whether a respondent owns or rents their residence (Q34). However, no clear pattern can be determined from the data; and
- The number of occupants living in the household (Q37). However, no clear pattern can be determined from the data.

The reasons given for respondents' most recent calls to Mt. Carmel (Q19) varies significantly by:

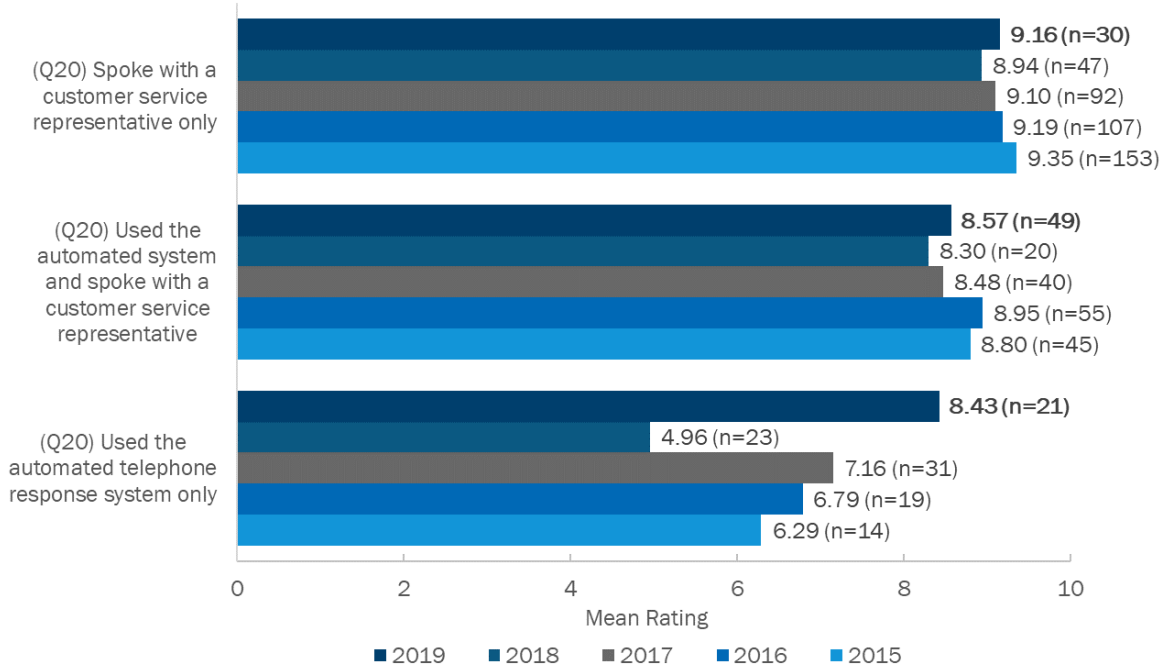
- Years lived at the current address (Q35). However, no clear pattern can be determined from the data.

Overall Findings: Q20 and Q21

Of those respondents who said they tried to reach Mt. Carmel Public Utility Co. in the past 12 months, 49 percent said they spoke to a live customer service representative only. Thirty percent said they used the automated telephone response system and spoke to a live customer service representative, and another 21 percent said they completed their call through an automated telephone response system only.

Respondents who only spoke with a customer service representative give Mt. Carmel Public Utility Co. an average rating of 9.16 for meeting their needs during the phone call. Respondents who spoke with a customer service representative and used the automated telephone response system give the utility an average rating of 8.57, and respondents who only used the automated telephone response system give the utility an average of 8.43 (See Figure 8).

Figure 8. Mean Ratings for Meeting Customers' Needs during Phone Calls[1]



[1] Only those respondents who said they called the utility in the past 12 months were asked this question.

Significant Differences – Prior Years to 2019

- In 2019, significantly more respondents said they used the automatic telephone response system only than in 2015 and 2016, while significantly fewer respondents said they spoke to a live customer service representative only (Q20) than in 2015.
- In 2019, meeting customers' needs during phone calls (Q21) is rated significantly higher than in 2018.
- In 2019, meeting customers' needs during phone calls is rated significantly higher by respondents who said they used the automated telephone response system only (Q21) than in 2018.

Significant Chi-Squares – 2019

The method used to complete the most recent call to the utility (Q20) varies significantly by:

- Respondent gender (Q40). Respondents who are female are more likely to use the automated telephone service and speak to a customer service representative.

Meeting customers' needs during phone calls (Q21) is rated higher by respondents who:

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13);
- Said they are VERY FAMILIAR with the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23);
- Said they are VERY FAMILIAR with the utility offering different bill payment options to qualified customers (Q25); and
- Said they are VERY FAMILIAR with the utility trimming trees to reduce the occurrence of power outages (Q26).

Meeting customers' needs during phone calls (Q21) varies significantly with:

- The length in hours of the SHORTEST outage lasting more than one minute (Q11). However, no clear pattern can be determined from the data; and
- Whether a respondent owns or rents their residence (Q34). However, no clear pattern can be determined from the data.

Significant Correlation Coefficients – 2019

Meeting the customers' needs during their most recent phone call to the utility (Q21) significantly correlates with:

- Providing electric service overall (Q1);
- Providing reliable electric service (Q2);
- Keeping the electric system, including power lines and equipment, in good working order (Q4); and
- Providing information about extended outages (Q16).

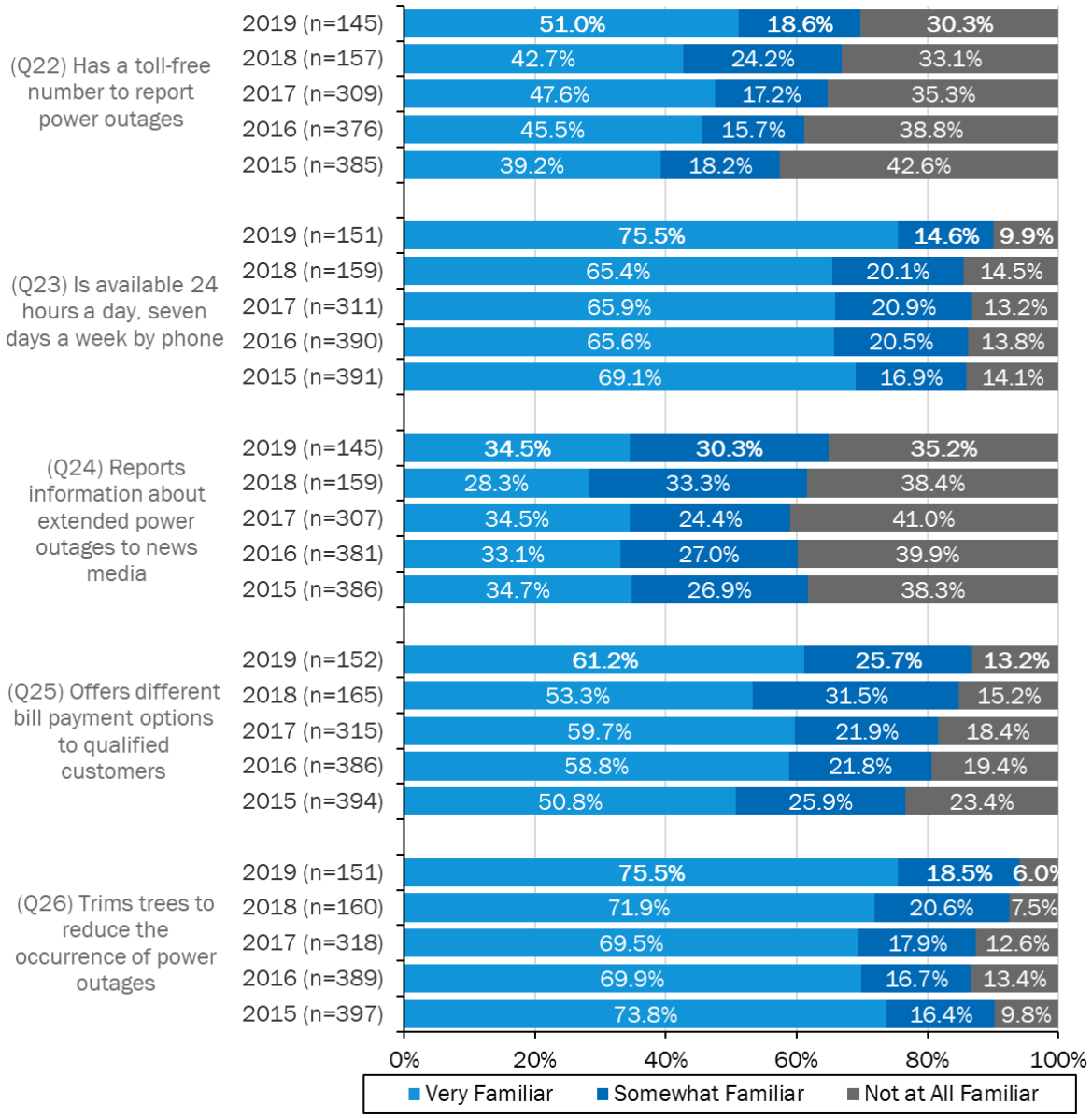
5.4 Understanding of Services

We asked survey respondents to rate their familiarity with various utility services. The findings are presented below.

Overall Findings: Q22, Q23, Q24, Q25, and Q26

Seventy-six percent of residential respondents said they are very familiar with Mt. Carmel Public Utility Co. trimming trees to reduce the occurrence of power outages. See Figure 9 below for a complete breakdown of respondent familiarity with various utility services.

Figure 9. Familiarity with Utility Services



Significant Differences – Prior Years to 2019

- In 2019, significantly more respondents than in 2015 said they are VERY FAMILIAR with Mt. Carmel Public Utility Co. having a toll-free number to report power outages (Q22), while significantly fewer respondents than in 2015 said they are NOT AT ALL FAMILIAR with this service.
- In 2019, significantly more respondents than in 2016, 2017, and 2018 said they are VERY FAMILIAR with Mt. Carmel Public Utility Co. being available 24 hours a day 7 days a week by phone in the event of a power outage (Q23).
- In 2019, significantly more respondents than in 2015 said they are VERY FAMILIAR with Mt. Carmel Public Utility Co. offering different bill payment options to qualified customers (Q25), while significantly fewer respondents than in 2015 said they are NOT AT ALL FAMILIAR with this service.
- In 2019, significantly fewer respondents than in 2016 and 2017 said they are NOT AT ALL FAMILIAR with Mt. Carmel Public Utility Co. trimming trees to reduce the occurrence of power outages (Q26).

Significant Chi-Squares – 2019

No significant chi-squares were identified for (Q22).

Awareness of the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23) varies significantly by:

- Whether a respondent owns or rents their residence (Q34). Respondents who own their residence are more likely to be VERY FAMILIAR.

No significant chi squares were identified for (Q24).

No significant chi squares were identified for (Q25).

Familiarity with the utility trimming trees to reduce the occurrence of outages (Q26) varies significantly by:

- Whether a respondent owns or rents their residence (Q34). Respondents who own their residence are more likely to be VERY FAMILIAR; and
- Respondent household income (Q36). However, no clear pattern can be determined from the data.

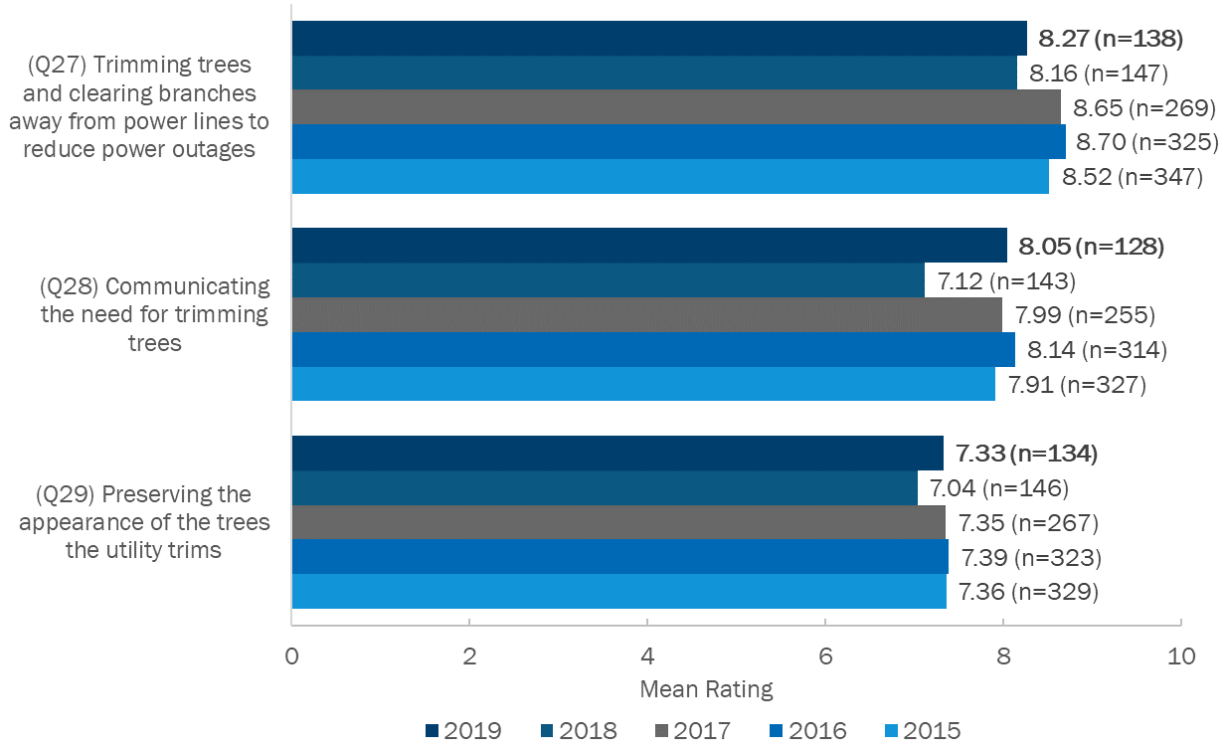
5.5 Tree Trimming Performance

We asked those residential respondents who are either very familiar or somewhat familiar with their utility trimming trees to reduce the occurrence of power outages three questions about Mt. Carmel Public Utility Co.'s tree trimming performance. Findings are presented below.

Overall Findings: Q27, Q28, and Q29

On average, respondents give Mt. Carmel Public Utility Co. a rating of 8.27 for trimming trees and clearing branches away from power lines to reduce power outages. In addition, respondents give Mt. Carmel Public Utility Co. an average rating of 8.05 for communicating the need for trimming trees while they give the utility an average rating of 7.33 for trying hard to preserve the appearance of the trees they trim (See Figure 10).

Figure 10. Mean Ratings for Tree Trimming Performance[1]



[1] Only respondents who said they are very or somewhat familiar with the utility trimming trees to reduce the occurrence of power outages were asked these questions.

Significant Differences – Prior Years to 2019

- Trimming trees to reduce the occurrence of power outages (Q27) was rated significantly lower in 2019 than in 2016.
- Communicating the need for trimming trees (Q28) was rated significantly higher in 2019 than in 2018.

Significant Chi-Squares – 2019

Trimming trees and clearing branches away from power lines to reduce power outages (Q27) is rated higher by respondents who:

- Report they have not experienced damage due to an electrical outage in the past 12 months (Q13); and
- Are VERY FAMILIAR with the utility trimming trees to reduce the occurrence of outages (Q26).

In addition, ratings for trimming trees and cleating branches away from power lines to reduce power outages (Q27) vary significantly by:

- The number of power outages lasting LESS than one minute (Q6). However, no clear pattern can be determined from the data;
- The length of the most recent power outage lasting MORE than one minute in the past 12 months (Q10). However, no clear pattern can be determined from the data;
- The length of the shortest power outage lasting MORE than one minute (Q11). However, no clear pattern can be determined from the data;
- The length of the longest power outage lasting MORE than one minute (Q12). However, no clear pattern can be determined from the data;
- The method used to complete most recent call to the utility (Q20). However, no clear pattern can be determined from the data; and
- Customer familiarity with Mt. Carmel offering different bill payment options to qualified customers, such as paying a fixed monthly amount (Q25). However, no clear pattern of response can be determined from the data.

Communicating the need for trimming trees (Q28) is rated higher by respondents who:

- Report they have not experienced damage due to an electrical outage in the past 12 months (Q13); and
- Are female (Q40).

In addition, ratings for communicating the need for trimming trees (Q28) vary significantly by:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6). However, no clear pattern of response can be determined from the data;
- The number of power outages lasting MORE than one minute in the past 12 months (Q8). However, no clear pattern can be determined from the data;
- The length of the most recent power outage lasting MORE than one minute in the past 12 months (Q10). However, no clear pattern can be determined from the data;
- The length in hours of the LONGEST outage lasting more than one minute (Q12). However, no clear pattern of response can be determined from the data;
- Customer familiarity with Mt. Carmel offering different bill payment options to qualified customers, such as paying a fixed monthly amount (Q25). However, no clear pattern of response can be determined from the data; and
- Whether or not the respondent personally sees or handles their utility bill (Q31). However, no clear pattern can be determined from the data.

Trying hard to preserve the appearance of the trees they trim (Q29) is rated higher by respondents who:

- Report they have not experienced damage due to an electrical outage in the past 12 months (Q13); and
- Are VERY FAMILIAR with the utility trimming trees to reduce the occurrence of outages (Q26).

In addition, ratings for the utility trying hard to preserve the appearance of the trees they trim (Q29) vary significantly by:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6). However, no clear pattern of response can be determined from the data;
- The length of the most recent power outage lasting MORE than one minute in the past 12 months (Q10). However, no clear pattern can be determined from the data;
- The length in hours of the LONGEST outage lasting more than one minute (Q12). However, no clear pattern of response can be determined from the data; and
- Customer familiarity with Mt. Carmel offering different bill payment options to qualified customers, such as paying a fixed monthly amount (Q25). However, no clear pattern of response can be determined from the data.

<u>Significant Correlation Coefficients – 2019</u>

Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Communicating the need for trimming trees (Q28); and
- Trying hard to preserve the appearance of the trees they trim (Q29).

Communicating the need for trimming trees (Q28) significantly correlates with:

- Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27); and
- Trying hard to preserve the appearance of the trees they trim (Q29).

Trying hard to preserve the appearance of the trees they trim (Q29) significantly correlates with:

- Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27); and
- Communicating the need for trimming trees (Q28).

5.6 Billing

We asked survey respondents if they receive a bill from Mt. Carmel Public Utility Co. at home and if they personally see or handle this bill. Those respondents who receive and handle this utility bill were asked to rate the utility's performance on providing a bill that makes it easy to tell how much the current month's charges are. The findings are presented below.

Overall Findings: Q30 and Q31

The vast majority of residential respondents (97 percent) said they receive a bill from Mt. Carmel Public Utility Company at their home, and 99 percent of these respondents said they personally see or handle this bill.

Significant Differences – Prior Years to 2019

- **No significant differences were observed for (Q30).**
- **In 2019, significantly more respondents than in 2015, 2016, 2017, and 2018 said that they personally see or handle the utility bill (Q31).**

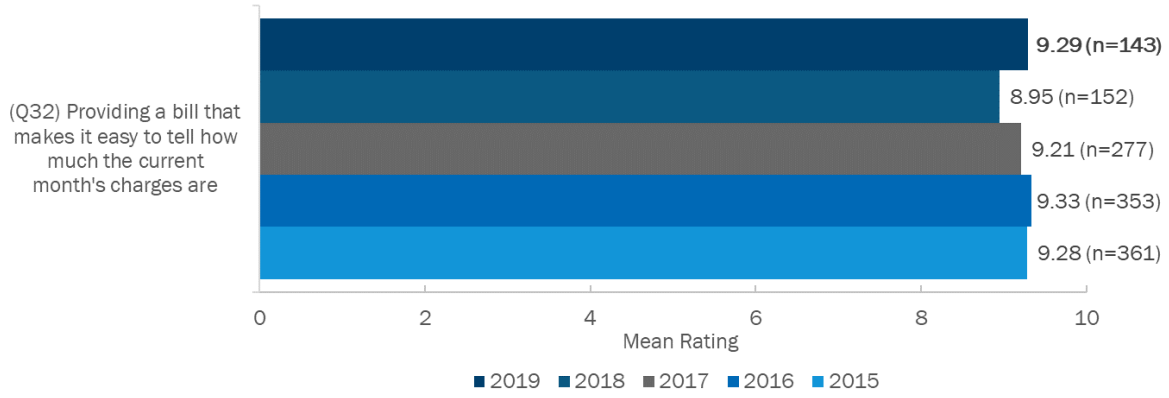
Significant Chi-Squares – 2019

- No significant chi-squares were observed.

Overall Findings: Q32

Respondents who receive and handle the bill from Mt. Carmel Public Utility Co. give the utility a mean rating of 9.29 for providing a bill that makes it easy to tell how much the current month's charges are. (See Figure 11Figure 11)

Figure 11. Mean Ratings for Billing[1]



[1] Only respondents who said they receive a bill from the utility at this location and personally see or handle this bill were asked this question.

Significant Differences – Prior Years to 2019

- **No significant differences were observed.**

Significant Chi-Squares – 2019

Providing a bill that makes it easy to tell how much the current month's charges are (Q32) varies significantly by:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6). However, no clear pattern can be determined from the data;
- The timing (month and day) of the most recent outage lasting MORE than one minute in the past 12 months (Q9). However, no clear pattern can be determined from the data;
- Whether or not they have experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13). However, no clear pattern can be determined from the data;
- Respondent familiarity with the utility having a toll-free number to report power outages (Q22). However, no clear pattern can be determined from the data;
- Respondent awareness of the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23). However, no clear pattern can be determined from the data; and
- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern can be determined from the data.

Significant Correlation Coefficients – 2019

- No significant correlations were observed.

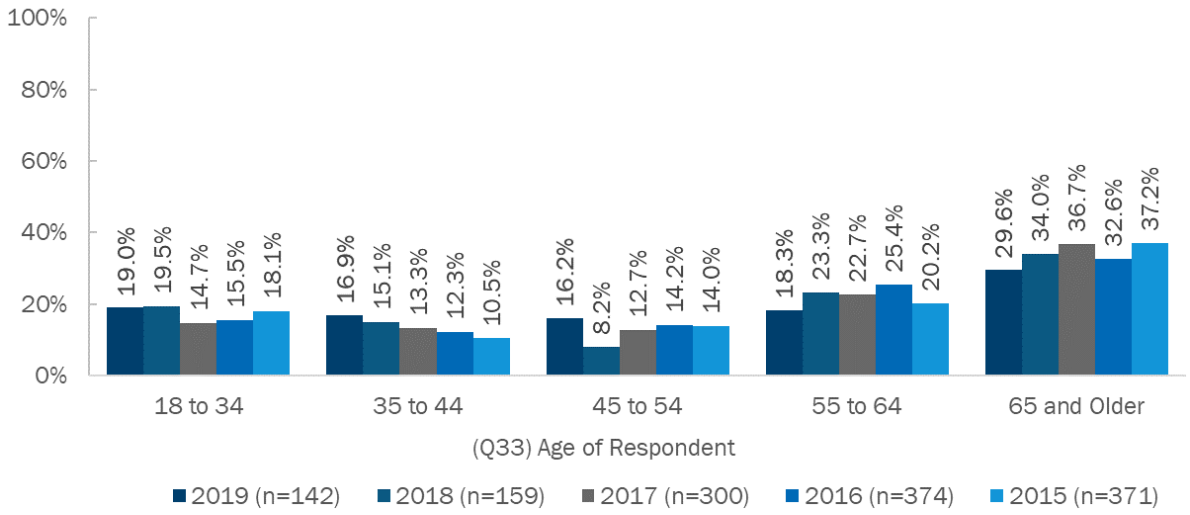
5.7 Demographics

We asked survey respondents several demographic questions in order to group their answers with those of others taking part in the survey. The findings are presented below.

Overall Findings: Q33

Thirty percent of survey respondents said they are 65 and older. (See Figure 12)

Figure 12. **Respondent Age**



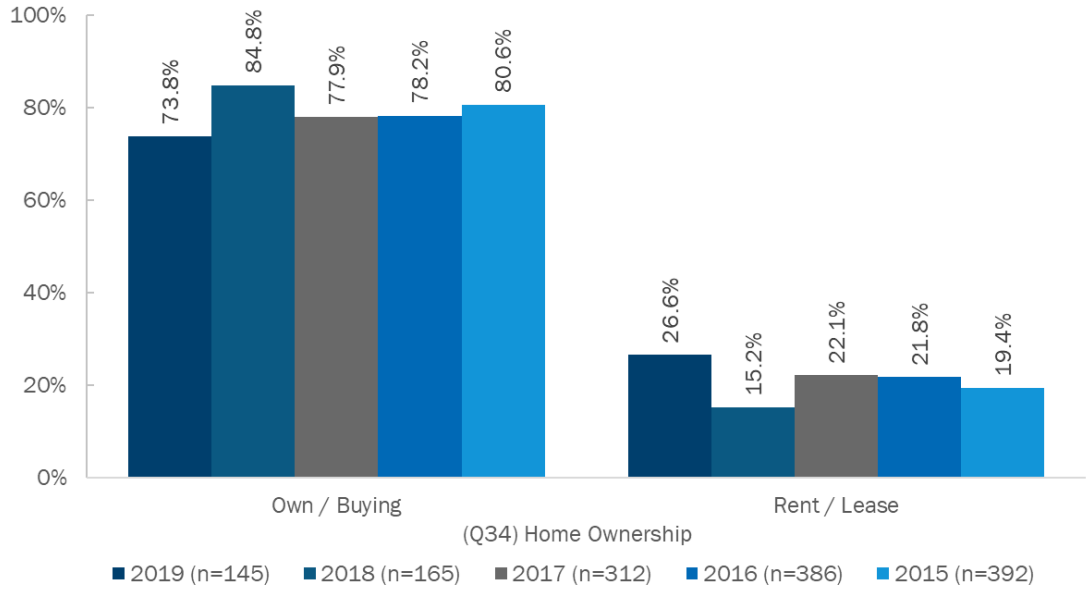
<u>Significant Differences – Prior Years to 2019</u>

- No significant differences were observed.

Overall Findings: Q34

Seventy-four percent of residential respondents said they either own their own home or are currently buying a home. Twenty-seven percent said they currently rent or lease their residence. (See Figure 13)

Figure 13. Ownership of Residence



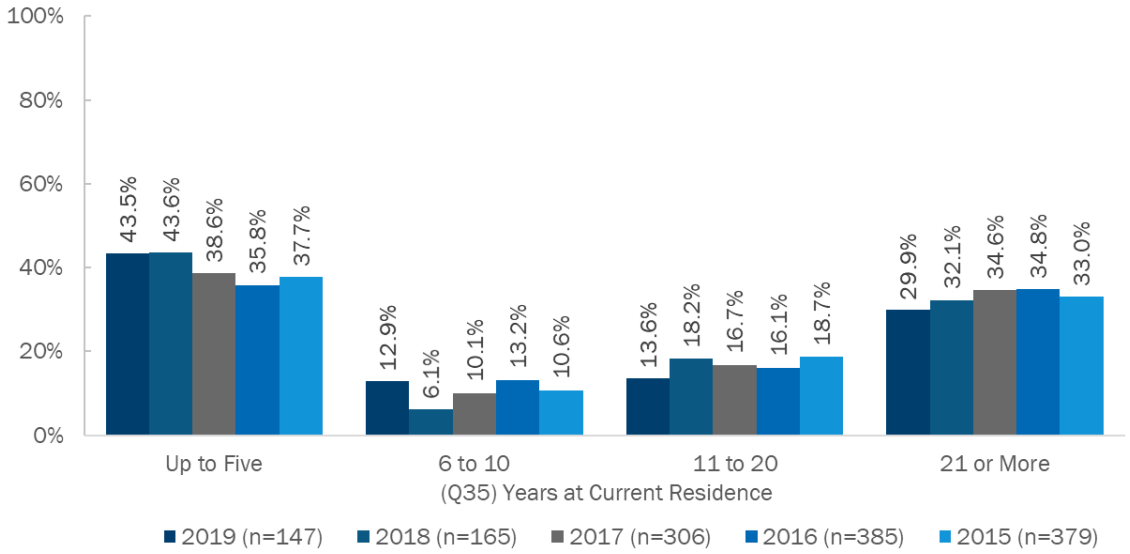
<u>Significant Differences – Prior Years to 2019</u>

- In 2019, significantly fewer respondents than in 2018 own or are buying their residence (Q34).

Overall Findings: Q35

Fifty-six percent of residential respondents said they have lived in their current residence up to ten years. Fourteen percent of respondents said they have lived in their current residence for 11 to 20 years while 30 percent said they have lived in their current residence for more than 20 years (See Figure 14).

Figure 14. Years Lived in Current Residence



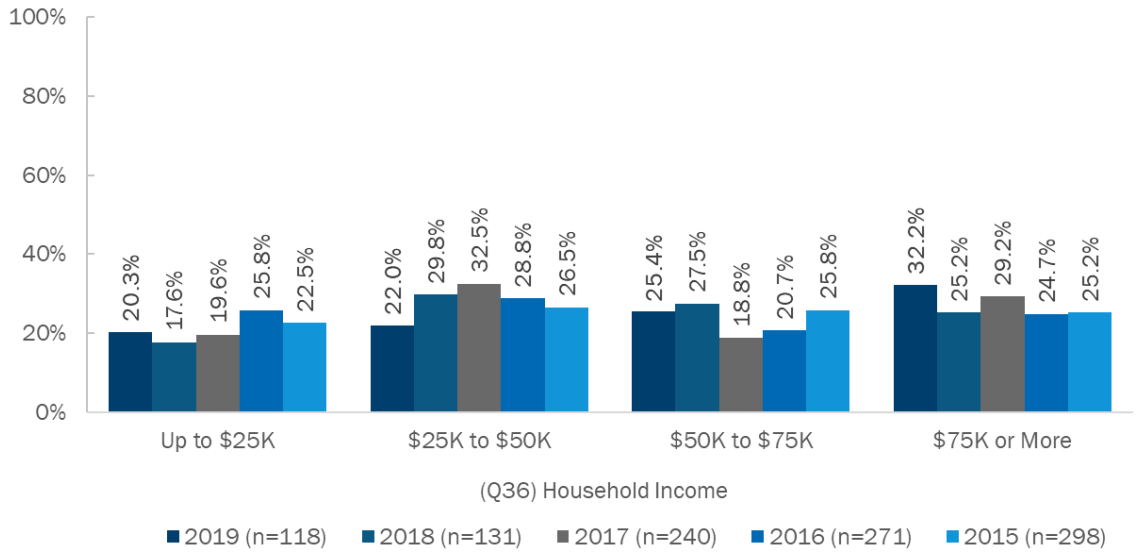
Significant Differences – Prior Years to 2019

- **In 2019, significantly more respondents said they have lived at their current residence six to ten years (Q35) than in 2018.**

Overall Findings: Q36

Forty-two percent of residential respondents said their household income is less than $50,000 per year (See Figure 15).

Figure 15. **Respondent Household Income**[1]



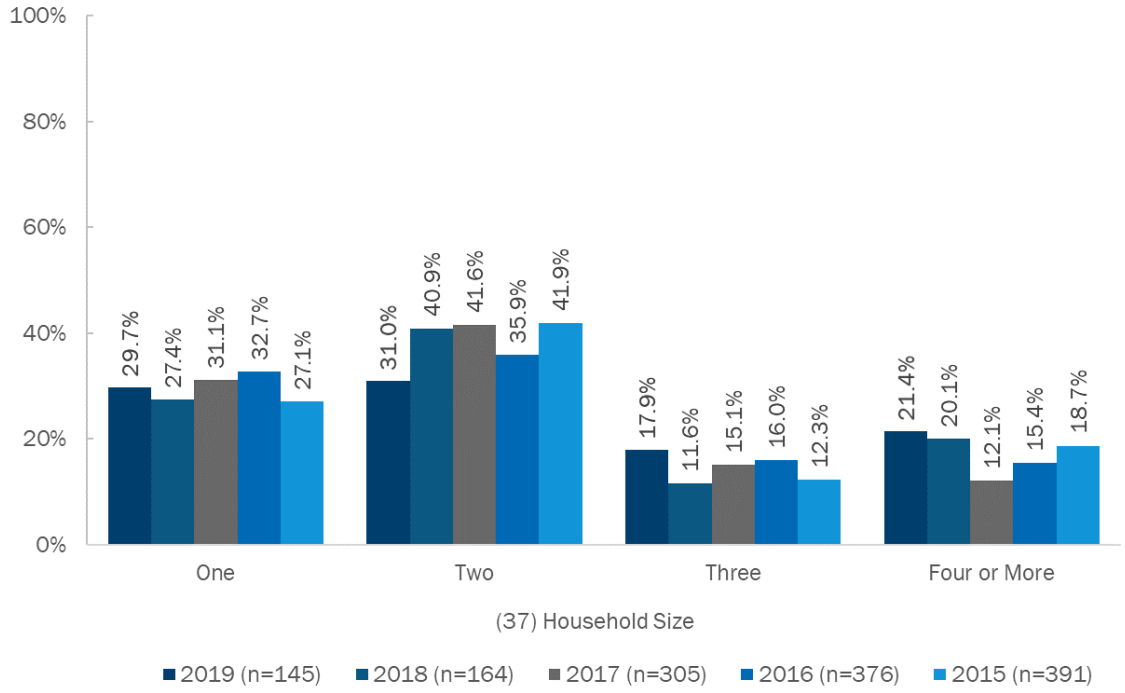
<u>Significant Differences – Prior Years to 2019</u>

- **In 2019, significantly fewer respondents than in 2017 said total their pre-tax household income from all sources fell in the $25,000 to $50,000 bracket (Q36).**

Overall Findings: Q37

Sixty-one percent of respondents said there is either one or two people living in their household while 18 percent said there are three people living in their household. Twenty-one percent of respondents said there are four or more people living in their household (See Figure 16).

Figure 16. People Living in Respondent Households



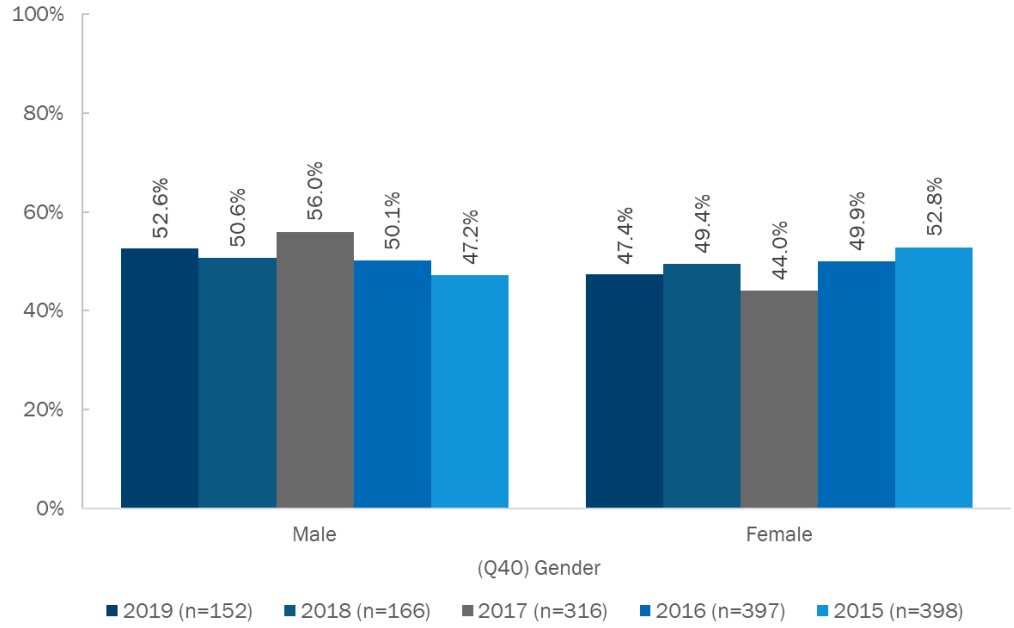
Significant Differences – Prior Years to 2019

- **In 2019, significantly fewer respondents than in 2015 and 2017 said they lived in a two-person household and significantly more respondents than in 2017 said they lived in four- or more person household (Q37).**

Overall Findings: Q40

Fifty-three percent of residential respondents are male. (See Figure 17)

Figure 17. Respondent Gender



Significant Differences – Prior Years to 2019

- No significant differences were observed.

6. Non-Residential Executive Summary

This section of the report is divided into seven major subsections that present the findings of the 42 telephone surveys conducted with Mt. Carmel Public Utility Co.'s non-residential customers. The subsections are in the order they appear in the survey instrument (see Appendix A).

- Subsection "6.1" provides ratings of the utility's overall electric service, their ability to provide reliable service, and their performance on keeping electric rates reasonable.
- Subsection "6.2" discusses Mt. Carmel Public Utility Co.'s reliability in detail including the length and timing of recent outages.
- Subsection "6.3" presents non-residential customer opinions of utility services including restoration of power, keeping the public informed, and being accessible.
- Subsection "6.4" discusses non-residential respondents' familiarity with various utility services.
- Subsection "6.5" presents customer opinions of utility tree trimming efforts.
- Subsection "6.6" discusses the receipt, handling, and ease of use of Mt. Carmel Public Utility Co.'s billing statements.
- Finally, subsection "6.7" presents respondent firmographic information including the number of employees at this respondent's location, the number of years in business at this location, and respondent gender.

All survey questions asked of non-residential respondents are discussed within this Non-Residential Executive Summary. There are three types of questions contained in the survey: rating questions, yes/no questions, and categorical questions. In each of the seven subsections which follow, overall question results from the 2019 study are either discussed or graphically presented and then significant findings for those questions are outlined. In addition, overall question results from the 2015, 2016, 2017, and 2018 studies are graphically presented and significant differences between 2019 and previous study years are outlined.

Rating Questions. All rating questions use a zero to 10 scale, where zero means the utility is doing a poor job and 10 means the utility is doing an excellent job. As required in Illinois Administrative Code 411.350, all rating questions underwent two broad statistical tests—Pearson Product Moment Correlation and Chi-Square.

- ***Pearson Product Moment Correlation Coefficients*** – Significant relationships between a particular rating question and all other rating questions were determined through the use of the Pearson Product Moment Correlation Coefficient. Only those rating question combinations that resulted in a correlation coefficient with an absolute value of 0.5 or higher are discussed within this Executive Summary.
- ***Chi-Square*** – Significant relationships between a particular rating question and all yes/no, categorical, and firmographic questions were determined through the use of the Chi-Square test. Only those Chi-Squares with a significance of 0.05 or less are discussed within this Executive Summary.

- *Independent T-test for Means* – Upon finding a significant Chi-Square, the research team utilized a standard independent t-test for means in order to provide further insight into the nature or direction of the relationship between a rating question and a yes/no, categorical, or firmographic question. This additional testing is not required as a part of the ICC rules, but is provided to give the reader further insight into the data without being unduly burdensome. When reviewing the t-test results, the research team looked for a "general pattern of response" rather than statistical significance within every dimension of the cross-tabulation table. For instances where the t-test resulted in no statistically significant differences or consistent/logical pattern across segment means, the relationship between the two cross-tabbed variables is described as having "no general pattern of response." Otherwise, the direction of the relationship is indicated.

Yes/No and Categorical Questions. As required in Illinois Administrative Code 411.350, all yes/no and categorical questions underwent a single statistical test—Chi Square.

- *Chi-Square* – Significant relationships between a particular yes/no or categorical question and all firmographic questions were determined through the use of the Chi-Square test. Only those Chi-Squares with a significance of 0.05 or less are discussed within this Executive Summary.
- *Independent Z-test for Percentages* – Upon finding a significant Chi-Square, the research team utilized a standard independent z-test for percentages in order to provide further insight into the nature or direction of the relationship between the yes/no or categorical question and a firmographic question. This additional testing is not required as a part of the ICC rules, but is provided to give the reader further insight into the data without being unduly burdensome. When reviewing the z-test results, the research team looked for a "general pattern of response" rather than statistical significance within every dimension of the cross-tabulation table. For instances where the z-test resulted in no statistically significant differences or consistent/logical pattern across segment proportions, the relationship between the two cross-tabbed variables is described as having "no general pattern of response." Otherwise, the direction of the relationship is indicated.

Significant Differences from 2019 to previous study years. As required in Illinois Administrative Code 411.355, all responses from the current year (2019) were compared to historical study responses (2015, 2016, 2017. and 2018). To determine significant relationships, two statistical tests were performed—independent t-test for means and independent z-test for proportions. Consistent with the overall analysis plan, only significant differences between 2019 and prior results are discussed. It is important to note that this report highlights all 2019 versus prior year comparisons where "statistically" significant differences are found. While many of these differences may not be large enough to be "meaningful" or "substantive" we, nevertheless, report them. The research team decided not to select a "substantive" significance level (which refers to an absolute difference between 2019 and prior results that must be achieved before a change is considered meaningful) because, while there is precedent for such a choice in customer satisfaction literature, setting a "substantive" significance level is fundamentally a subjective process. In order to keep the process completely objective, we have reported on all "statistically" significant differences. However, some of the "statistical" differences highlighted in this report (with respect to 2019 versus prior year comparisons) may not be meaningful because the absolute difference is small.

- *Independent T-test for Means* – Significant relationships between 2019 and prior results for all rating questions were determined through the use of a standard independent t-test for means.

- ***Independent Z-test for Percentages*** – Significant relationships between 2019 and prior results for all yes/no and categorical questions were determined through the use of a standard independent z-test for percentages.

An explanation of the tables contained in the appendices (Chi-Square tables and t-test/z-test tables) and the statistical tests used in this study (correlation coefficients, Chi-Square tests, t-tests, and z-tests) are located in Appendix B. Correlation coefficients of all non-residential rating questions by all other rating questions are located in Appendix C. Required cross tabulations, statistical and t-test/z-test tables for all non-residential survey questions are available in electronic format (file names: Appendix E – Mt Carmel Non-Residential Chi Square.doc and Appendix E – Mt Carmel Non-Residential Z Test & T Test.doc, respectively) while a chart of question combinations with significant Chi-Squares is located in Appendix E. Required cross tabulations comparing 2019 and prior results for all non-residential survey questions are also available in electronic format (file name: Appendix F – Mt Carmel Non-Residential Comparison 2015-2019.doc).

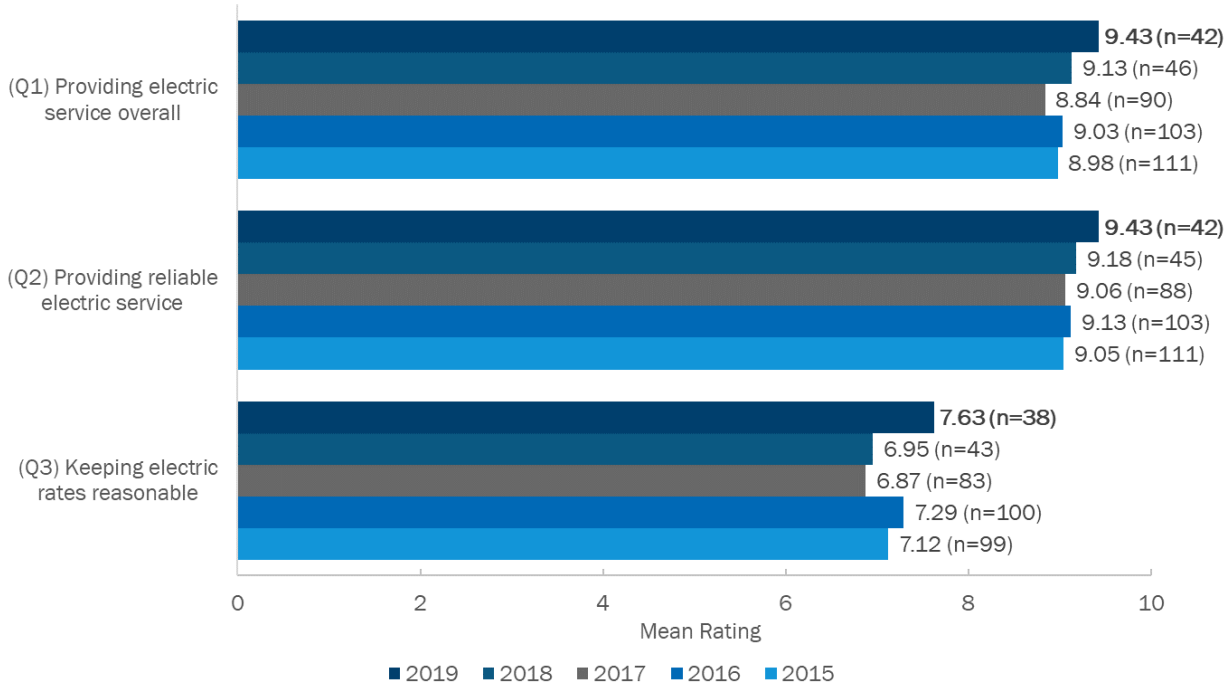
6.1 Overall Satisfaction

We asked survey respondents to rate the job Mt. Carmel Public Utility Co. does on providing electric service overall. In addition, we asked respondents to rate the reliability of electric service they receive and to rate how well Mt. Carmel Public Utility Co. keeps their electric rates reasonable. Key findings are summarized below.

Overall Findings: Q1, Q2, and Q3

Respondents give Mt. Carmel Public Utility Co. an average rating of 9.43 for providing reliable electric service. In addition, respondents give Mt. Carmel Public Utility Co. an average rating of 9.43 for providing electric service overall while they give the utility an average rating of 7.63 for keeping electric rates reasonable (See Figure 18).

Figure 18. Mean Ratings for Overall Satisfaction



Significant Differences – Prior Years to 2019

- **Providing electric service overall (Q1) is rated significantly higher in 2019 than in 2015 and 2017.**

Significant Chi-Squares – 2019

Ratings for providing electric service overall (Q1) vary significantly by:

- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern of response can be determined from the data.

Providing reliable electric service (Q2) vary significantly by:

- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern of response can be determined from the data.

Ratings for keeping electric rates reasonable (Q3) is rated higher by respondents who:

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13).

In addition, ratings for keeping electric rates reasonable (Q3) vary significantly by:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6). However, no clear pattern of response can be determined from the data;
- Whether or not the respondent has tried to reach the utility by phone in the past 12 months (Q18). However, no clear pattern of response can be determined from the data; and
- The method used to complete most recent call to the utility (Q20). However, no clear pattern of response can be determined from the data.

<u>Significant Correlation Coefficients – 2019</u>

Providing electric service overall (Q1) significantly correlates with:

- Providing reliable electric service (Q2);

Providing reliable electric service (Q2) significantly correlates with:

- Providing electric service overall (Q1);
- Keeping the electric system, including power lines and equipment, in good working order (Q4); and
- Minimizing the number of power interruptions lasting LESS than one minute (Q5).

Keeping electric rates reasonable (Q3) significantly correlates with:

- Minimizing the number of power interruptions lasting LESS than one minute (Q5);
- Restoring electric service at your business when outages occur (Q15);
- Providing information about extended outages (Q16);
- Being accessible during an outage (Q17);
- Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27);
- Trying hard to preserve the appearance of the trees they trim (Q29); and
- Providing a bill that makes it easy to tell how much the current month's charges are (Q32).

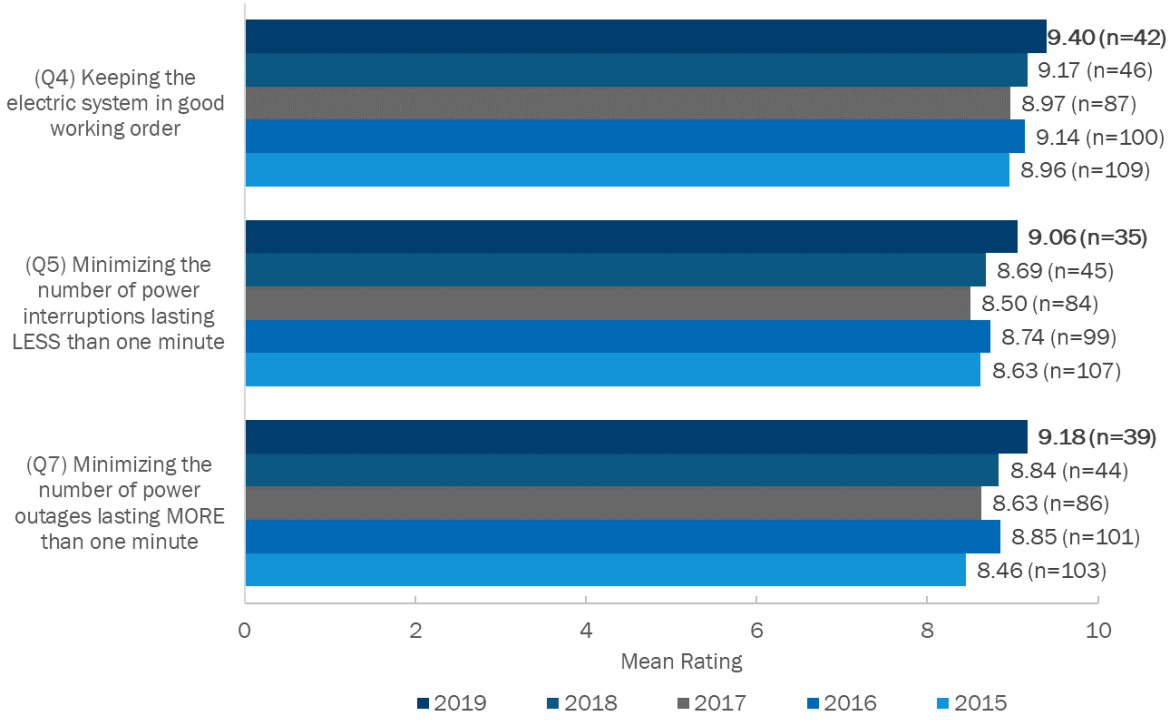
6.2 Reliability Performance

Respondents were asked to rate Mt. Carmel Public Utility Co.'s performance on electric reliability. In addition, respondents were asked how many power interruptions lasting less than and more than one minute they have experienced in the past 12 months and how long these power interruptions lasted. Key findings are summarized below.

Overall Findings: Q4, Q5, and Q7

Respondents give Mt. Carmel Public Utility Co. a mean rating of 9.40 for keeping the electric system in good working order. In addition, respondents give the utility a mean rating of 9.18 for minimizing the number of power interruptions lasting MORE than one minute while they give the utility a mean rating of 9.06 for minimizing the number of power outages lasting LESS than one minute. (See Figure 19).

Figure 19. Mean Ratings for Reliability Performance



Significant Differences – Prior Years to 2019

- **Minimizing the number of power outages lasting MORE than one minute (Q7) is rated significantly higher in 2019 than in 2015.**

Significant Chi-Squares – 2019

Ratings for keeping the electric system in good working order (Q4) vary significantly by:

- The method used to complete most recent call to the utility (Q20). However, no clear pattern of response can be determined from the data;

- The number of employees, both full and part time, employed at the respondent's location (Q38). However, no clear pattern of response can be determined from the data;
- Respondent gender (Q40). However, no clear pattern of response can be determined from the data.

Ratings for minimizing the number of power outages lasting LESS than one minute (Q5) vary significantly by:

- The number of power interruptions lasting LESS than one minute in the past 12 months (Q6); and
- The number of power outages lasting MORE than one minute in the past 12 months (Q8).

Minimizing the number of power outages lasting MORE than one minute (Q7) is rated higher by respondents who:

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13).

In addition, ratings for minimizing the number of power outages lasting MORE than one minute (Q7) vary significantly by:

- Respondent familiarity with the utility reporting information about extended power outages to the news media to keep customers informed (Q24). However, no clear pattern of response can be determined from the data; and
- Respondent gender (Q40). However, no clear pattern of response can be determined from the data.

<u>Significant Correlation Coefficients – 2019</u>

Keeping the electric system, including power lines and equipment, in good working order (Q4) significantly correlates with:

- Providing reliable electric service (Q2).

Minimizing the number of power interruptions lasting LESS than one minute (Q5) significantly correlates with:

- Providing reliable electric service (Q2);
- Keeping your electric rates reasonable (Q3);
- Minimizing the number of power outages lasting MORE than one minute (Q7);
- Restoring electric service at your business when outages occur (Q15);
- Providing information about extended outages (Q16);
- Being accessible during an outage (Q17);
- Communicating the need for trimming trees (Q28); and
- Providing a bill that makes it easy to tell how much the current month's charges are (Q32).

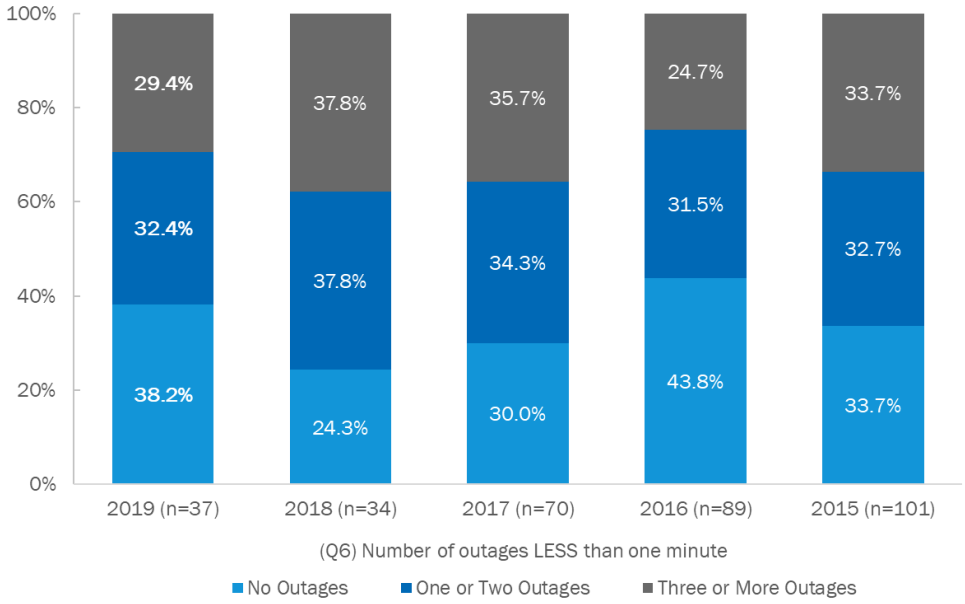
Minimizing the number of power outages lasting MORE than one minute (Q7) significantly correlates with:

- Minimizing the number of power interruptions lasting LESS than one minute (Q5); and
- Restoring electric service at your business when outages occur (Q15).

Overall Findings: Q6 and Q8

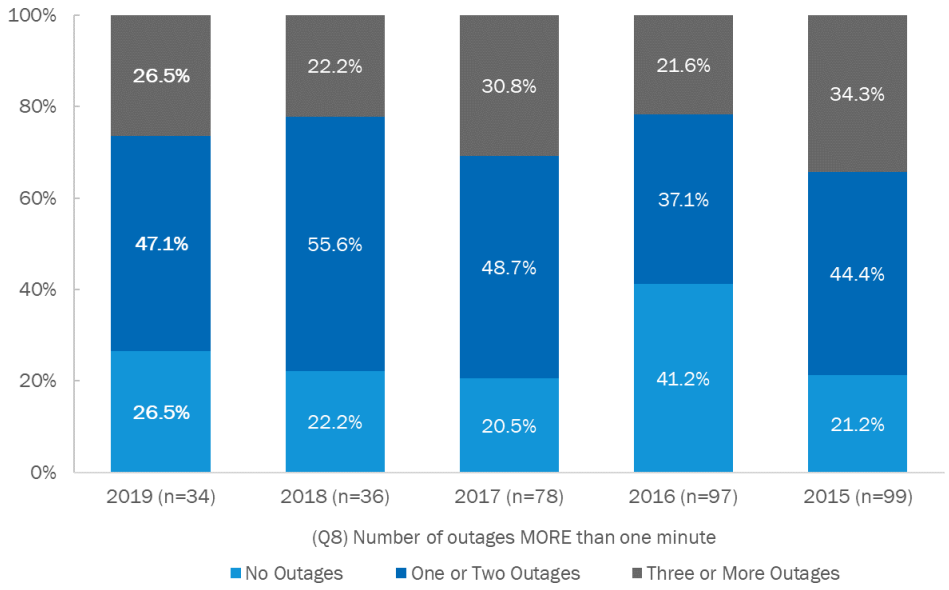
In the past 12 months, 38 percent of all non-residential respondents said they have experienced no power interruptions lasting LESS than one minute while 32 percent said they have experienced one or two and another 29 percent said they have experienced three or more outages (See Figure 20).

Figure 20. Number of Outages (LESS than one minute)



In the past 12 months, 27 percent of all non-residential respondents said they have experienced no power outages lasting MORE than one minute while 47 percent said they have experienced one or two and 27 percent of respondents said they have experienced three or more outages (See Figure 21).

Figure 21. Number of Outages (MORE than one minute)



Significant Differences – Prior Years to 2019

- **No significant differences were observed.**

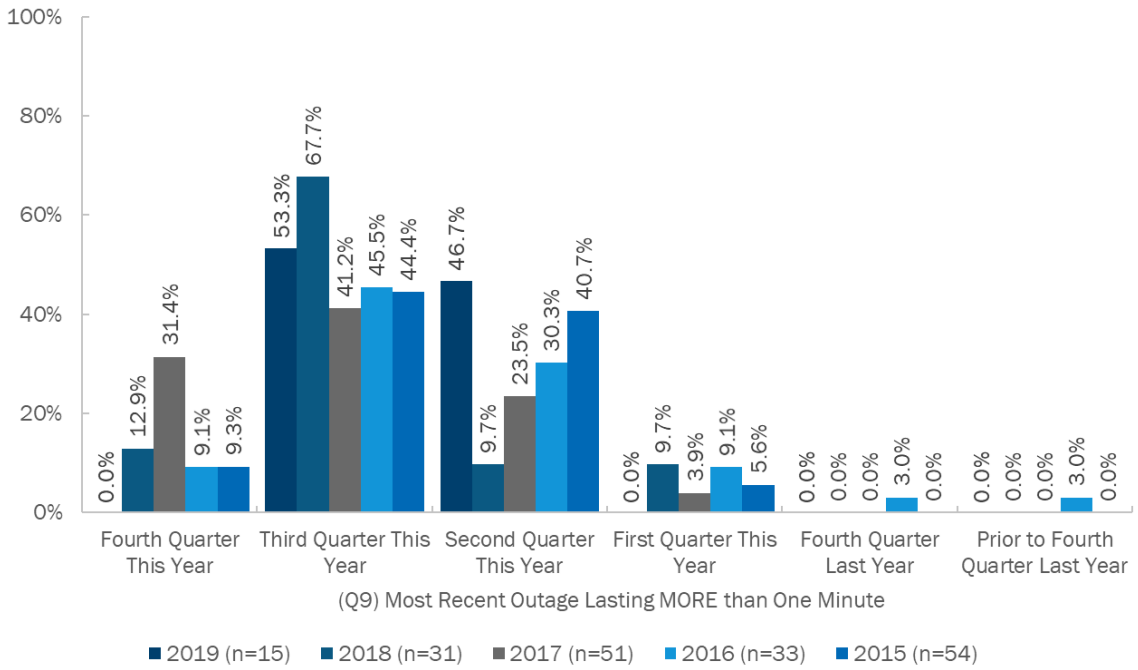
Significant Chi-Squares – 2019

– No significant chi-squares were observed.

Overall Findings: Q9

Of those respondents who have experienced an outage lasting MORE than one minute in the past 12 months, 53 percent said the most recent outage occurred during the third quarter of 2019 while 47 percent said the most recent outage occurred during the second quarter of 2019. See Figure 22 below for a complete breakdown of when respondents said their last outage lasting MORE than one minute occurred.

Figure 22. Most Recent Outage



Significant Differences – Prior Years to 2019

- **No significant differences were observed.**

Significant Chi-Squares – 2019

- No significant chi-squares were observed.

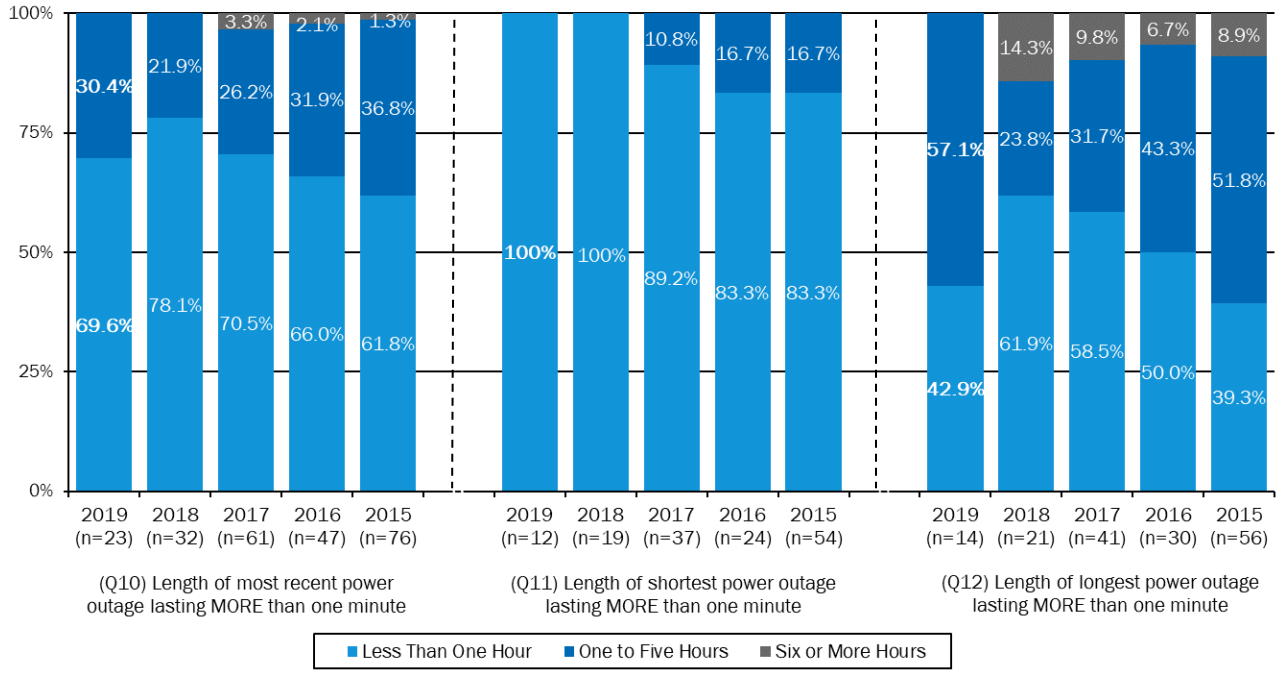
Overall Findings: Q10, Q11, and Q12

Seventy percent of respondents who experienced a power outage lasting MORE than one minute during the past 12 months said the most recent power outage lasted for less than one hour. See Figure 23Figure 23 below for a complete breakdown of respondents who experienced a power outage lasting MORE than one minute in the past 12 months.

One hundred percent of the respondents who experienced more than one outage lasting MORE than one minute during the past 12 months said the shortest of these outages lasted less than one hour. See **Error! Reference source not found. Error! Reference source not found.** for a complete breakdown of the shortest outages respondents experienced lasting MORE than one minute in the past 12 months.

Forty-three percent of respondents who experienced more than one outage lasting MORE than one minute during the past 12 months said the longest of these outages lasted less than one hour. See Figure 23 **Error! Reference source not found.** for a complete breakdown of the longest outages respondents experienced lasting MORE than one minute in the past 12 months.

Figure 23. Length of Outages[1]



[1] Only those respondents who said they experienced an outage lasting MORE than one minute in the past 12 months were asked for the length of their most recent power outage.

Significant Differences – Prior Years to 2019

- No significant differences were observed for (Q10).
- In 2019, significantly more respondents than in 2015, 2016, and 2017 report their shortest power outage lasting MORE than one minute during the past 12 months (Q11) was less than one hour.

- **In 2019, significantly more respondents than in 2018 said the longest power outage they experienced lasting MORE than one minute during the past 12 months (Q12) was one to five hours.**

Significant Chi-Squares – 2019

- No significant chi-squares were observed.

Overall Findings: Q13 and Q14

In the past 12 months, ninety percent of all non-residential respondents said they experienced no loss or damage due to electrical outages or other electrical problems. One hundred percent of those respondents who did experience loss or damages experienced loss of electrical equipment or accessories. (See Table 4).

Table 4. Loss or Damage Suffered due to Electric Outages or Related Problems

	Percent of Respondents[1]				
(Q14) Loss or Damage Suffered	2019	2018	2017	2016	2015
Interruption of business	0.0%	0.0%	100.0%	66.7%	50.0%
Loss of electrical equipment or accessories	100.0%	100.0%	50.0%	33.3%	37.5%
Loss of perishables	0.0%	0.0%	0.0%	0.0%	12.5%
Other	0.0%	0.0%	0.0%	0.0%	12.5%
(n)	3	2	2	3	8

[1] Respondents were permitted to mention more than one type of loss or damage suffered. Only those respondents who said they suffered a loss or damage due to an electrical outage or related problem were asked this question.

Significant Differences – Prior Years to 2019

- **In 2019, respondents are significantly more likely than in 2015 and 2016 to say the sort of loss or damage suffered is to electrical equipment or accessories (Q14).**

Significant Chi-Squares – 2019

- No significant chi squares were identified.

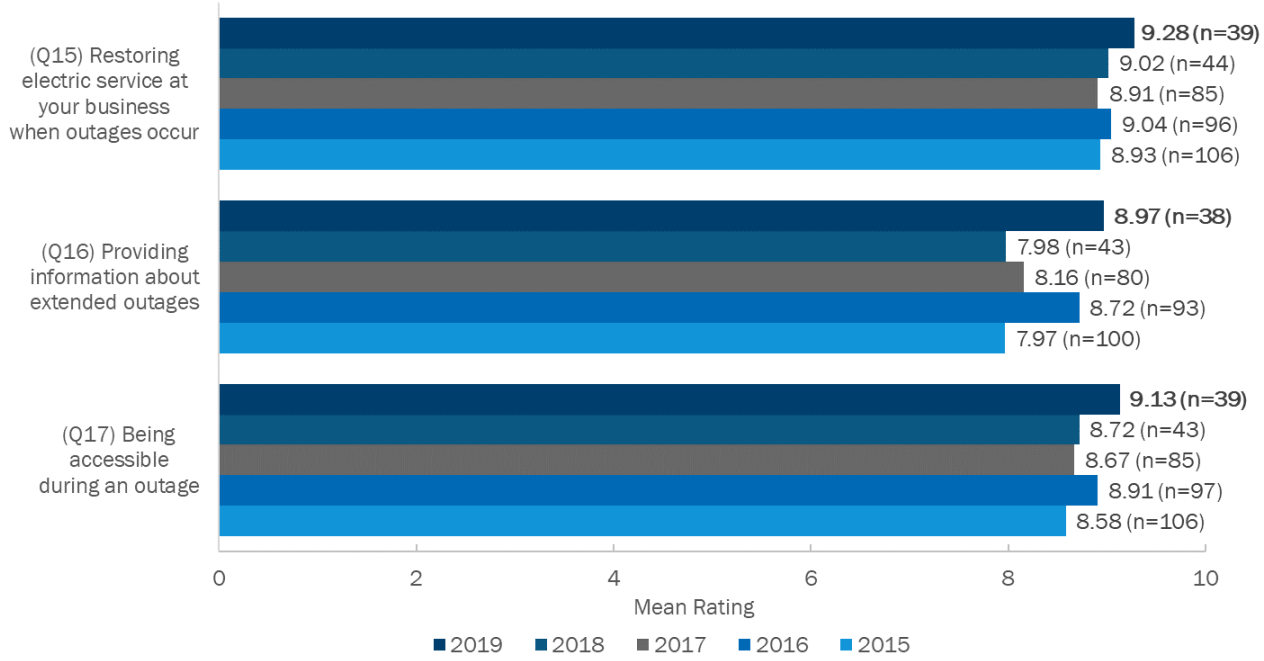
6.3 Customer Service Performance

In this subsection we discuss the utility's performance on customer service-related items including the restoration of power, accessibility during outages, providing information about outages, and meeting customers' needs during service calls.

Overall Findings: Q15, Q16, and Q17

Respondents give Mt. Carmel Public Utility Co. a mean rating of 9.28 for restoring electric service at their business when outages occur. In addition, respondents give Mt. Carmel Public Utility Co. a mean rating of 9.13 for being accessible during an outage while they give the utility a mean rating of 8.97 for providing information about extended outages (See Figure 24 below).

Figure 24. Mean Ratings for Customer Service Performance



Significant Differences – Prior Years to 2019

- **Providing information about extended outages (Q16) is rated significantly higher in 2019 than in 2015 and 2018.**

Significant Chi-Squares – 2019

Restoring electric service at your business when outages occur (Q15) was rated higher by respondents who:

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13).

Additionally, ratings for restoring electric service at your business when outages occur (Q15) vary significantly by:

- Respondent awareness of the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23). However, no clear pattern of response can be determined from the data; and
- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern of response can be determined from the data.

Providing information about extended outages (Q16) was rated higher by respondents who:

- Said they have NOT experienced any loss or damage due to electrical outages or other electrical problems in the last 12 months (Q13).

Additionally, ratings for the utility providing information about extended outages (Q16) vary significantly by:

- Respondent familiarity with the utility reporting information about extended power outages to the news media to keep customers informed (Q24). However, no clear pattern of response can be determined from the data; and
- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern of response can be determined from the data.

Ratings for the utility being accessible during at outage (Q17) vary significantly by:

- Respondent familiarity with the utility reporting information about extended power outages to the news media to keep customers informed (Q24). However, no clear pattern of response can be determined from the data; and
- Respondent familiarity with the utility trimming trees to reduce the occurrence of power outages (Q26). However, no clear pattern of response can be determined from the data.

Significant Correlation Coefficients – 2019

Restoring electric service at your business when outages occur (Q15) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Minimizing the number of power interruptions lasting LESS than one minute (Q5);
- Minimizing the number of power outages lasting MORE than one minute (Q7);
- Providing information about extended outages (Q16);
- Being accessible during an outage (Q17);
- Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27);
- Communicating the need for trimming trees (Q28);
- Trying hard to preserve the appearance of the trees they trim (Q29); and
- Providing a bill that makes it easy to tell how much the current month's charges are (Q32).

Providing information about extended outages (Q16) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Minimizing the number of power interruptions lasting LESS than one minute (Q5);

- Restoring electric service at your business when outages occur (Q15); and
- Being accessible during an outage (Q17).

Being accessible during an outage (Q17) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Minimizing the number of power interruptions lasting LESS than one minute (Q5);
- Restoring electric service at your business when outages occur (Q15);
- Providing information about extended outages (Q16);
- Meeting the customers' needs during the most recent phone call (Q21);
- Communicating the need for trimming trees (Q28); and
- Providing a bill that makes it easy to tell how much the current month's charges are (Q32).

Overall Findings: Q18 and Q19

Fifty-seven percent of all non-residential respondents said they tried to reach Mt. Carmel Public Utility Co. by phone in the past 12 months. Fifty percent of these respondents called to report a power problem such as an outage or a downed wire. See Table 5 below for a complete breakdown of the reasons respondents cited for their most recent call to the utility.

Table 5. Reason for Making Most Recent Call to the Utility

(Q19) Reason for Most Recent Call	Percent of Respondents[1]				
	2019	2018	2017	2016	2015
Report a power problem, outage, or downed wire	50.0%	58.6%	56.8%	58.8%	68.3%
Make a payment arrangement or other billing question	25.0%	24.1%	22.7%	19.6%	16.7%
Get information about locations, programs, or services	4.2%	3.4%	11.4%	2.0%	10.0%
Stop, start, or transfer service		--	4.5%	2.0%	--
Other	12.5%	13.8%	4.5%	17.6%	5.0%
(n)	24	29	44	51	60

[1] Only those respondents who said they called the utility in the past 12 months were asked this question.

Significant Differences – Prior Years to 2019

- **No significant differences observed.**

Significant Chi-Squares – 2019

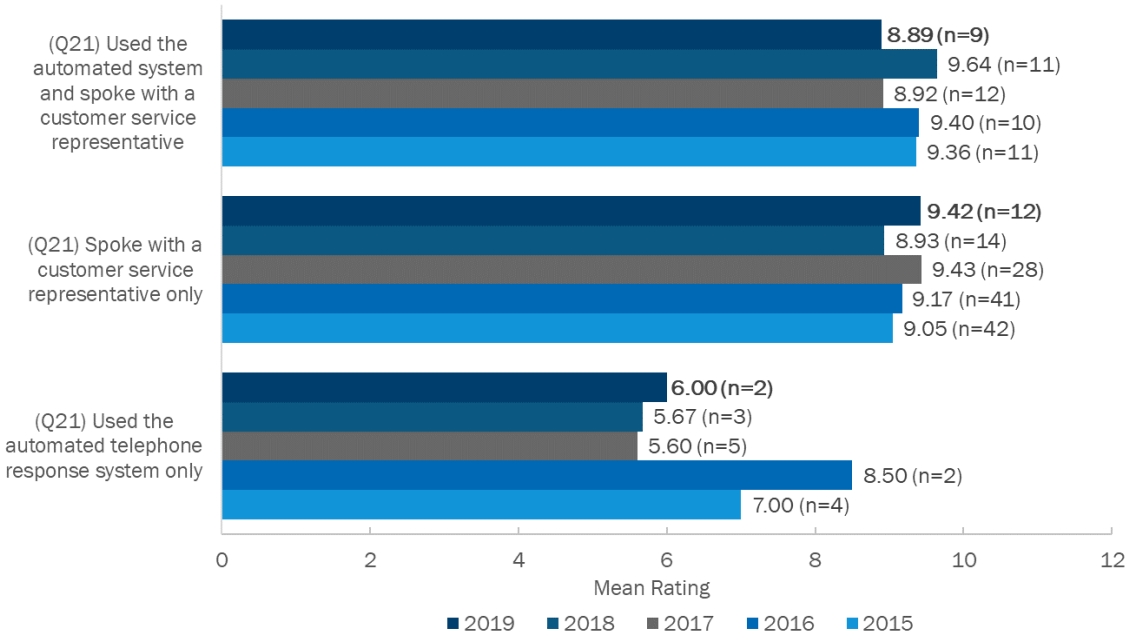
- No significant chi-squares were observed.

Overall Findings: Q20 and Q21

Of those respondents who tried to reach Mt. Carmel Public Utility Co. in the past 12 months, 52 percent said they spoke to a live customer service representative only. Thirty-nine percent said they spoke to a live customer service representative and used the automated telephone response system, and another 9 percent said they used the automated telephone response system only.

Respondents who only spoke with a customer service representative give Mt. Carmel Public Utility Co. an average rating of 9.42. Respondents who used the automated system and spoke with a customer service representative give the utility an average rating of 8.89 for meeting their needs during the phone call, while respondents who only used the automated telephone response system give the utility an average rating of 6.00 (See Figure 25).

Figure 25. Mean Ratings for Meeting Customers' Needs during Phone Calls[1]



[1] Only those respondents who said they called the utility in the past 12 months were asked this question.

Significant Differences – Prior Years to 2019

- **In 2019, significantly fewer respondents than in 2016 said they spoke to a live customer service representative only (Q20).**

Significant Chi-Squares – 2019

How well the utility met customer's needs during the call (Q21) varies significantly by:

- The method used to complete most recent call to the utility (Q20). However, no clear pattern of response can be determined from the data.

Significant Correlation Coefficients – 2019

Meeting the customers' needs during their most recent phone call to the utility (Q21) significantly correlates with:

- Being accessible during an outage (Q17);
- Communicating the need for trimming trees (Q28); and
- Providing a bill that makes it easy to tell how much the current month's charges are (Q32).

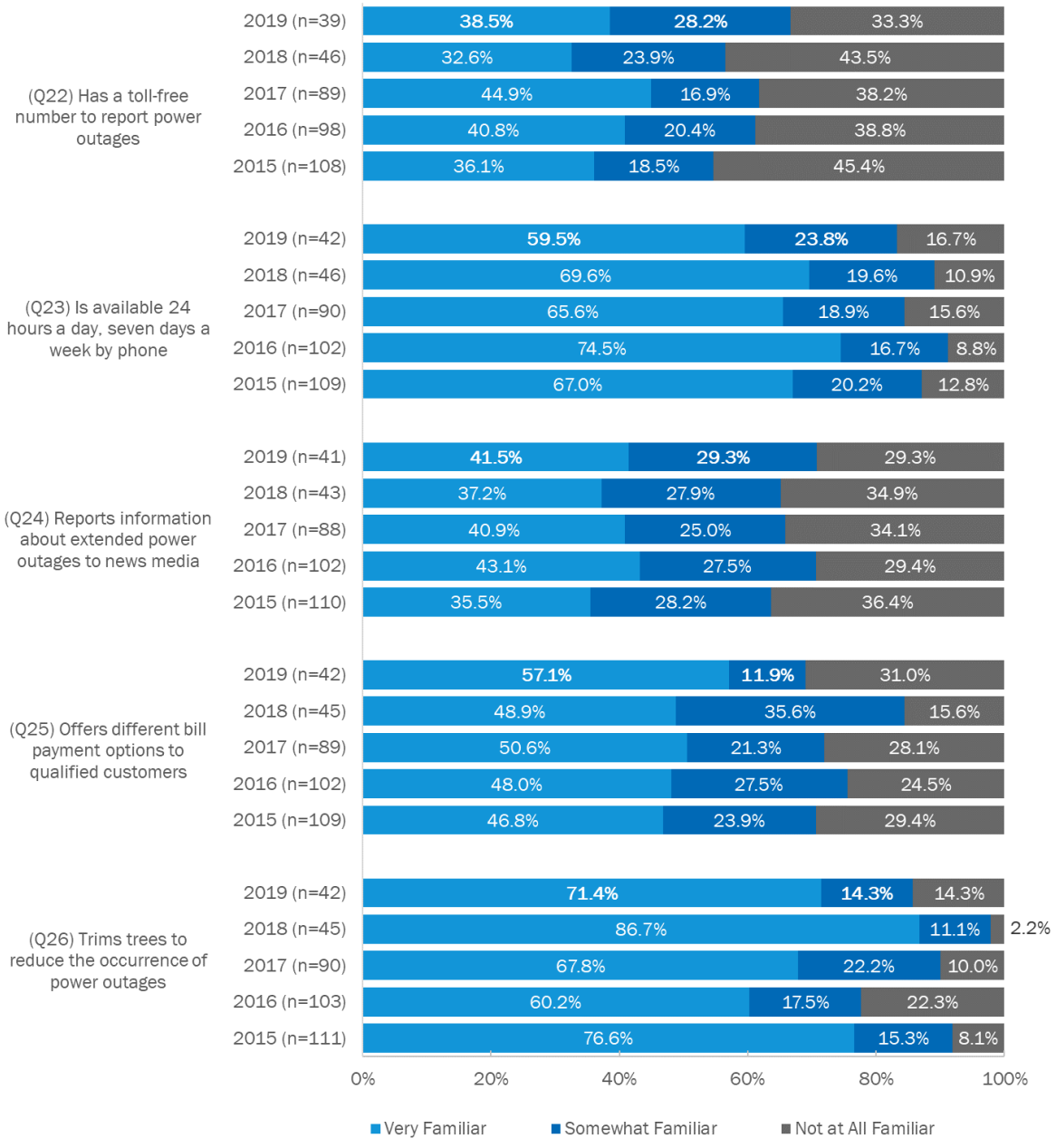
6.4 Understanding of Services

We asked survey respondents to rate their familiarity with various utility services. The findings are presented below.

Overall Findings: Q22, Q23, Q24, Q25, and Q26

Seventy-one percent of non-residential respondents said they are very familiar with their utility trimming trees to reduce the occurrence of power outages. See Figure 26 below for a complete breakdown of respondent familiarity with various utility services.

Figure 26. Familiarity with Utility Services



Significant Differences – Prior Years to 2019

- In 2019, significantly fewer respondents said they are SOMEWHAT FAMILIAR with their utility offering different bill paying options to qualified customers (Q25) than in 2016 and 2018.
- In 2019, significantly more respondents said they are NOT AT ALL FAMILIAR with their utility trimming trees to reduce the occurrence of power outages (Q26) than in 2018.

Significant Chi-Squares – 2019

- No significant chi-squares were observed.

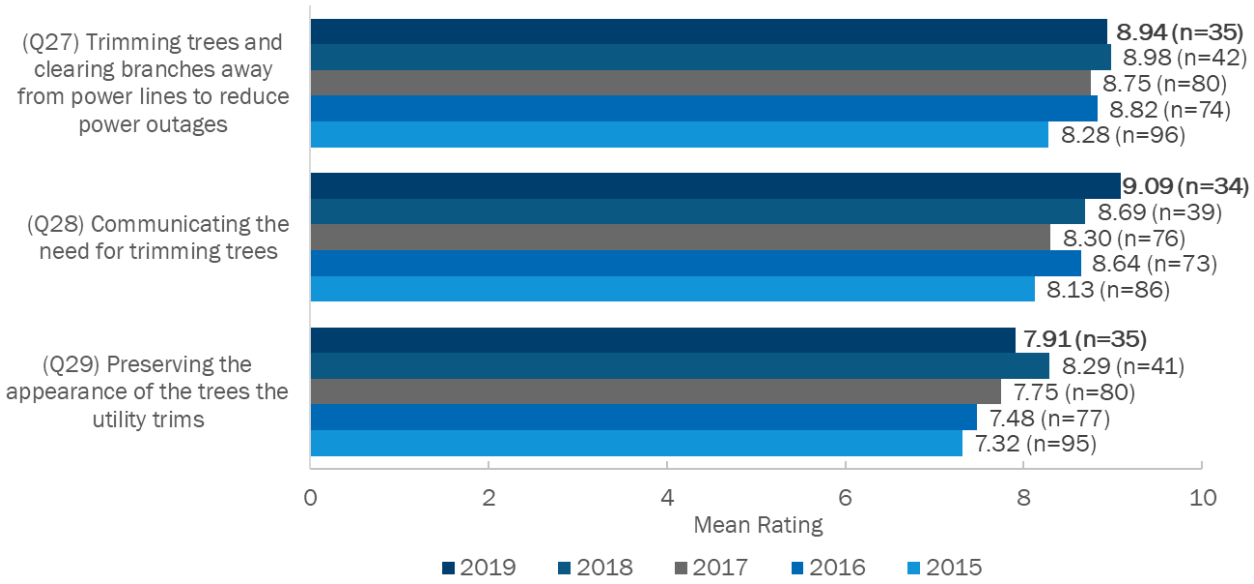
6.5 Tree Trimming Performance

We asked those non-residential respondents who are either very familiar or somewhat familiar with their utility trimming trees to reduce the occurrence of power outages three questions about Mt. Carmel Public Utility Co.'s tree trimming performance. Findings are presented below.

Overall Findings: Q27, Q28, and Q29

On average, respondents give Mt. Carmel Public Utility Co. a rating of 8.94 for trimming trees and clearing branches away from power lines to reduce power outages. In addition, respondents give Mt. Carmel Public Utility Co. an average rating of 9.09 for communicating the need for trimming trees while they give the utility an average rating of 7.91 for trying hard to preserve the appearance of the trees they trim (See Figure 27).

Figure 27. Mean Ratings for Tree Trimming Performance[1]



[1] Only respondents who said they are very or somewhat familiar with the utility trimming trees to reduce the occurrence of power outages were asked these questions.

Significant Differences – Prior Years to 2019

- **Communicating the need for trimming trees (Q28) is rated significantly higher in 2019 than in 2015 and 2017.**

Significant Chi-Squares – 2019

Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27) is rated higher by respondents who:

- Said they are VERY FAMILIAR with the utility trimming trees to reduce the occurrence of power outages (Q26).

In addition, ratings for tree trimming (Q27) varies significantly by:

- The method used to complete most recent call to the utility (Q20). However, no clear pattern of response can be identified from the data;

- Respondent familiarity with the utility offering different bill payment options to qualified customers (Q25). However, no clear pattern of response can be identified from the data;
- Whether the customer receives a bill at their business (Q30). However, no clear pattern of response can be identified from the data; and
- Respondent gender (Q40). However, no clear pattern of response can be identified from the data.

Communicating the need for trimming trees (Q28) is rated higher by respondents who:

- Receive a bill at their business (Q30).

In addition, ratings for communicating the need for trimming trees (Q28) vary significantly by:

- Respondent familiarity with the utility reporting information about extended power outages to the news media to keep customers informed (Q24). However, no clear pattern of response can be determined from the data;
- Respondent familiarity with the utility offering different bill payment options to qualified customers (Q25). However, no clear pattern of response can be determined from the data; and
- Customer familiarity with Mt. Carmel trimming trees to reduce the occurrence of outages (Q26). However, no clear pattern of response can be determined from the data.

Preserving the appearance of the trees the utility trims (Q29) is rated higher by respondents who:

- Said they have tried to contact Mt. Carmel by phone in the past 12 months (Q18); and
- Said they are VERY FAMILIAR with the toll-free number to report power outages (Q22).

<u>Significant Correlation Coefficients – 2019</u>

Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Restoring electric service at your business when outages occur (Q15); and
- Trying hard to preserve the appearance of the trees they trim (Q29).

Communicating the need for trimming trees (Q28) significantly correlates with:

- Minimizing the number of power interruptions lasting LESS than one minute (Q5);
- Restoring electric service at your business when outages occur (Q15);
- Being accessible during an outage (Q17);
- Meeting the customers' needs during the most recent phone call (Q21); and
- Providing a bill that makes it easy to tell how much the current month's charges are (Q32).

Trying hard to preserve the appearance of the trees they trim (Q29) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Restoring electric service at your business when outages occur (Q15); and
- Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages (Q27).

6.6 Billing

We asked survey respondents if they receive a bill from Mt. Carmel Public Utility Co. at their place of business and if they personally see or handle this bill. Those respondents who receive and handle this utility bill were asked to rate the utility's performance on providing a bill that makes it easy to tell how much the current month's charges are. The findings are presented below.

Overall Findings: Q30 and Q31

Eighty-three percent said they receive a bill from Mt. Carmel Public Utility Co. at their business and 91 percent of these respondents said they personally see or handle this bill.

Significant Differences – Prior Years to 2019

- **In 2019, significantly more respondents than in 2015 and 2017 said they personally see or handle the utility bill (Q31).**

Significant Chi-Squares – 2019

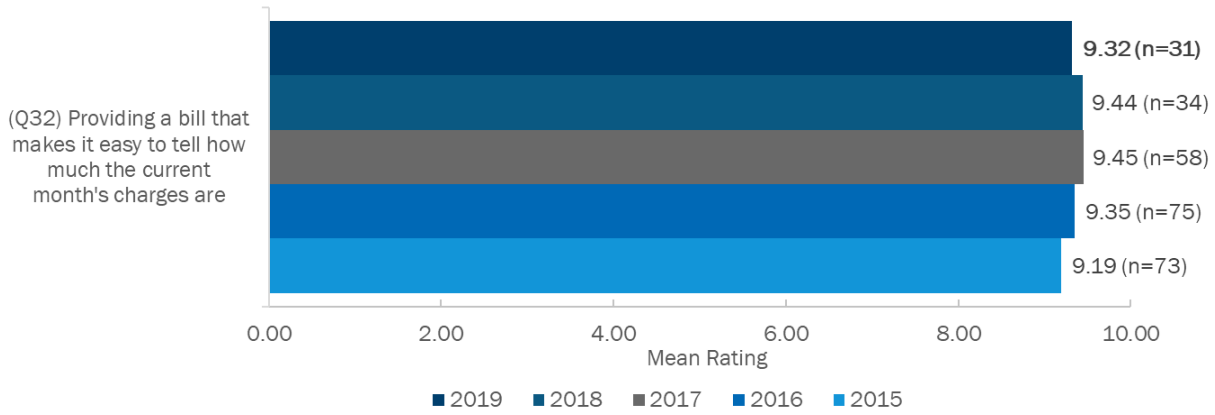
The likelihood of seeing or handling this bill (Q31) varies significantly by:

- Years the respondent's company has conducted business at this location (Q39). However, no clear pattern of response can be determined from the data.

Overall Findings: Q32

Respondents who receive and handle the bill from Mt. Carmel Public Utility Co. give the utility a mean rating of 9.32 for providing a bill that makes it easy to tell how much the current month's charges are. (See Figure 28)

Figure 28. Mean Ratings for Billing[1]



[1] Only respondents who said they receive a bill from the utility at this location and personally see or handle this bill were asked this question.

Significant Differences – Prior Years to 2019

- **No significant differences were observed.**

Significant Chi-Squares – 2019

The job Mt. Carmel does on providing a bill that makes it easy to tell how much the current month's charges is rated higher by respondents who:

- Have not experienced a loss due to an electrical outage or problem in the past 12 months (Q13); and
- Said they are VERY FAMILIAR with Mt. Carmel offering different bill payment options to its customers (Q25).

Respondent ratings of the job that Mt Carmel does providing a bill that makes it easy to tell how much the month's charges are (Q32) varies significantly by:

Respondent awareness of the utility being available 24 hours a day, seven days a week by phone in the event of a power outage (Q23). However, no clear pattern of response can be determined from the data;

- Respondent familiarity with the utility reporting information about extended power outages to the news media to keep customers informed (Q24). However, no clear pattern of response can be determined from the data; and
- Customer familiarity with Mt. Carmel trimming trees to reduce the occurrence of outages (Q26). However, no clear pattern of response can be determined from the data.

Significant Correlation Coefficients – 2019

Providing a bill that makes it easy to tell how much the current month's charges are (Q32) significantly correlates with:

- Keeping your electric rates reasonable (Q3);
- Minimizing the number of power interruptions lasting LESS than one minute (Q5);
- Restoring electric service at your business when outages occur (Q15);
- Being accessible during an outage (Q17);
- Meeting the customers' needs during the most recent phone call (Q21); and
- Communicating the need for trimming trees (Q28).

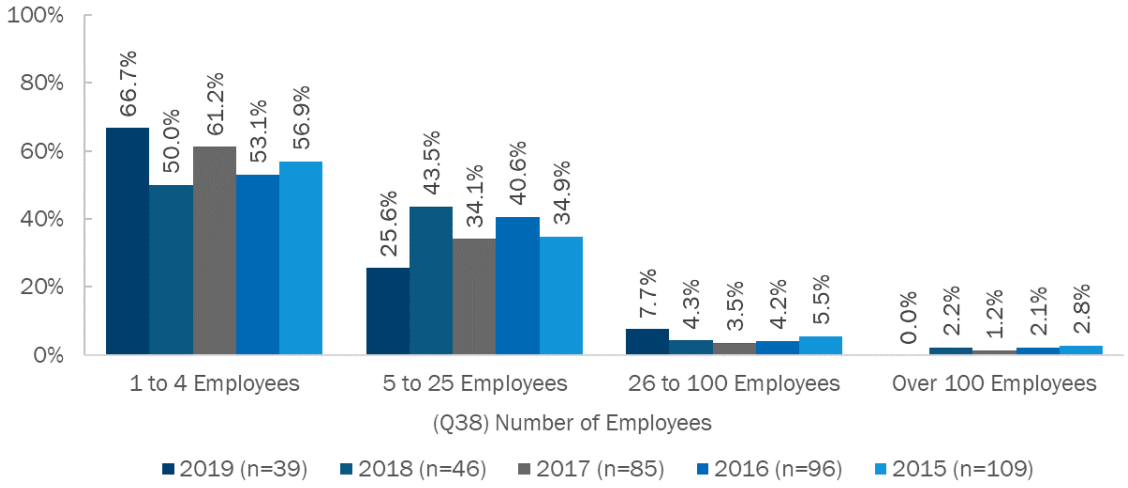
6.7 Firmographics

We asked survey respondents several firmographic questions in order to group their answers with those of others taking part in the survey. The findings are presented below.

Overall Findings: Q38

Sixty-seven percent of non-residential respondents have between one and four employees at their business location. In addition, 26 percent of respondents have from five to twenty-five employees at their location while 8 percent have twenty-six to one-hundred employees and zero percent have more than one-hundred employees (See Figure 29).

Figure 29. Number of Employees at Respondent's Location



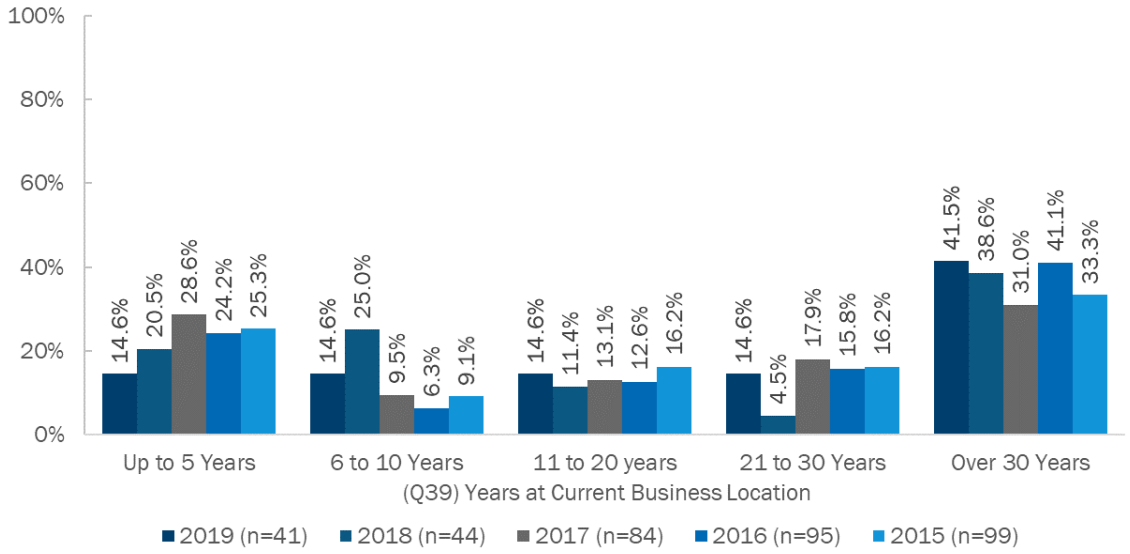
Significant Differences – Prior Years to 2019

- No significant differences were observed.

Overall Findings: Q39

Twenty-nine percent of respondents said they have conducted business at their current location for 10 years or fewer. Fifteen percent of respondents said they have conducted business at their current location for 11 to 20 years, 15 percent have for 21 to 30 years, and 42 percent have for more than 30 years (See Figure 30).

Figure 30. Years Respondent Has Conducted Business at Current Location



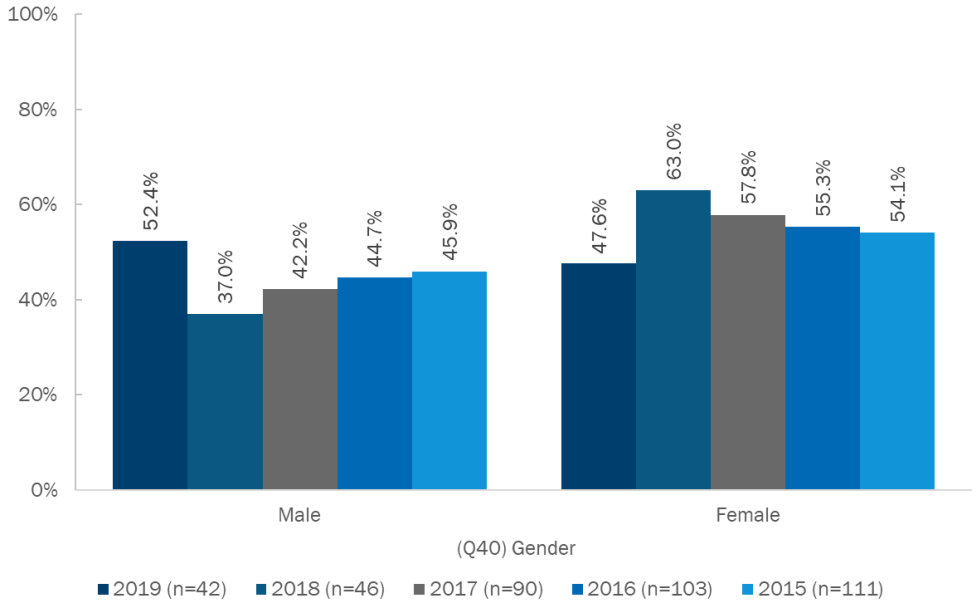
Significant Differences – Prior Years to 2019

- No significant differences were observed.

Overall Findings: Q40

Fifty-two percent of non-residential respondents are male. (See Figure 31)

Figure 31. Respondent Gender



Significant Differences – Prior Years to 2019

- No significant differences were observed.

Appendix A. Survey Instrument

Illinois Customer Satisfaction Survey Instrument

QA. ENTER TYPE OF CUSTOMER FROM SAMPLE

1 Residential
2 Non-Residential

QB. ENTER SAMPLING FRAME

1 Customer database
2 Random digit dial {"RDD"}
3 Purchased list
4 Other

Residential Portion

Hello, my name is _____. We are conducting an opinion survey required by the Illinois Public Utilities Act about the service you receive from your electric company. May I speak with the head of household who is most familiar with the service from your electric company?

1 Yes {CONTINUE}
2 No {TERMINATE}
3 (Refused) {TERMINATE}

Residential Screening

Your opinions are very important to us. At no time will I try to sell you anything and you will not be contacted as a result of this call. This survey will take about ten minutes.

IF USING RDD SAMPLE, ASK QC SO CUSTOMER CAN BE ASSIGNED TO A SERVICE AREA

QC. What is your zip code?

[RECORD NUMBER]
1 (Don't know/Refused) {TERMINATE}

IF USING CUSTOMER LIST FOR SAMPLE, ASK QD TO VERIFY ADDRESS

QD. Just to confirm, have I reached you at {READ ADDRESS FROM SAMPLE}?

1 Yes {CONTINUE}
2 No {TERMINATE}
3 (Don't know) {TERMINATE}
4 (Refused) {TERMINATE}

QE. Are you the person who is most familiar with the service you receive from your electric company at this address?

1 Yes {SKIP TO QG}
2 No {CONTINUE}
3 (Don't know) {TERMINATE}
4 (Refused) {TERMINATE}

QF. May I speak to the person who is most familiar with your electric service now?

1 Yes {CONTINUE}
2 (Refused) {TERMINATE}
3 No - IF NO, ASK: I would like to make an appointment to call him/her at a specific time at his/her convenience. Could we please schedule a convenient time? {ARRANGE APPOINTMENT CALLBACK DATE AND TIME}

(IF NECESSARY, READ INTRODUCTION TO RESPONDENT)

Hello, we are conducting an opinion survey required by the Illinois Public Utilities Act about the service you receive from your electric company. Your opinions are very important to us. At no time will I try to sell you anything and you will not be contacted as a result of this survey. The survey will take about ten minutes.

QG. We would like to ask you some questions about the electric service you receive from your electric company. Is this a convenient time?

1 Yes {CONTINUE}
2 No {ARRANGE APPOINTMENT CALLBACK DATE AND TIME}
3 (Don't know) {TERMINATE}
4 (Refused) {TERMINATE}

QH. Do you, or does a member of your family living in your home, work for an advertising agency or market research firm, or for a gas, electric or phone company?

1 Yes {TERMINATE}
2 No {CONTINUE}
3 (Don't know) {TERMINATE}
4 (Refused) {TERMINATE}

END OF RESIDENTIAL SCREENING PORTION

Non-Residential Portion

Hello, my name is _____. We are conducting an opinion survey required by the Illinois Public Utilities Act about the service you receive from your electric company.

Non-residential Screening

QI. Just to verify, have I reached {MOVE IN COMPANY NAME FROM SAMPLE}?

1 No {TERMINATE}
2 Yes {CONTINUE}
3 (Don't know) {TERMINATE}
4 (Refused) {TERMINATE}

QJ. {IF A CONTACT PERSON'S NAME HAS BEEN PROVIDED, ASK} I understand that the name of the person who is most familiar with electric service in your organization is _____. Is this correct?

1 Yes {SKIP TO QM}
2 No {CONTINUE}
3 (Don't know) {TERMINATE}
4 (Refused) {TERMINATE}

QK. {IF A CONTACT PERSON'S NAME HAS NOT BEEN PROVIDED OR IF QJ=2, ASK} Can you please tell me the name of the person who is most familiar with the electric service for this business/organization located at {MOVE IN ADDRESS FROM SAMPLE}? {IF RESPONDENT ANSWERS "DON'T KNOW," THEN ASK TO SPEAK WITH SOMEONE WHO MIGHT KNOW AND USE THE SAME INTRODUCTION WITH THE NEW RESPONDENT}

NAME _____

TITLE _____

QL. May I speak to {RESTORE NAME FROM QJ OR QK} now?

1 Yes {CONTINUE}
2 (Refused) {TERMINATE}
3 No {IF RESPONDENT NOT AVAILABLE, ASK:} I would like to make an appointment to call {RESTORE NAME FROM QJ OR QK} at a specific time at his/her convenience. Could we please schedule a convenient time?

{IF NECESSARY, READ INTRODUCTION TO RESPONDENT}

Hello, I am _____. We are conducting an opinion survey required by the Illinois Public Utilities Act about the service you receive from your electric company. Your opinions are very important to us. At no time will I try to sell you anything and you will not be contacted as a result of this survey. The survey will take only ten minutes.

QM. We would like to ask you some questions about the electric service your {business/organization} receives from your electric distribution company. Is this a convenient time?

1 Yes {CONTINUE}
2 (Refused) {TERMINATE}
3 No {ARRANGE APPOINTMENT CALLBACK DATE AND TIME}

END OF NON-RESIDENTIAL SCREENING PORTION

Residential and Non-Residential Portion

{READ FOR NON-RESIDENTIAL ONLY UNTIL RESIDENTIAL CUSTOMERS HAVE CHOICE; THEN READ FOR ALL CUSTOMERS} Electric service consists of two main parts. One part produces electricity at power plants. The other part moves the electricity through power lines to your location. Under a competitive electric system, the electricity will come to you through the power lines already in place. The company that owns and maintains these power lines is called an electric distribution company. It's your opinions about the electric distribution company we'd like to focus on today.

QN What is the name of your electric (insert the word "distribution" for non-residential only) company? {ASK AS OPEN END}

1 AmerenCIPS/CIPS/Central Illinois Public Service {CONTINUE}
2 AmerenUE/Union Electric [NOW AmerenCIPS] {CONTINUE}
3 AmerenCILCO/CILCO/Central Illinois Light Company {CONTINUE}
4 ComEd/Commonwealth Edison {CONTINUE}
5 AmerenIP/Illinois Power/Dynegy {CONTINUE}
6 MidAmerican Energy/Iowa-Illinois Gas & Electric {CONTINUE}
7 Mt. Carmel Public Utility Company {CONTINUE}
8 Alliant/Alliant Energy {CONTINUE}
9 Other {TERMINATE}
10 Don't know {TERMINATE}
11 Refused {TERMINATE}

[Programming Note: Terminate interview if utility identified by respondent is different from utility who provided sample for that respondent.]

END OF RESIDENTIAL AND NON-RESIDENTIAL SCREENING

Overall Satisfaction

First, let's talk about {RESTORE QN RESPONSE}. I'd like you to rate {RESTORE QN RESPONSE}'s performance using a zero to ten scale, where a zero means a poor job and a ten means an excellent job. Of course, you can use any number between zero and ten. How would you rate the job that {RESTORE QN RESPONSE} does on….

{RANDOMIZE Q1-Q3}

Q1. Providing electric service overall

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q2. Providing reliable electric service

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q3. Keeping your electric rates reasonable

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Reliability Performance

Now, I'd like to talk to you about {RESTORE QN RESPONSE}'s performance on electric reliability. How would you rate the job that {RESTORE QN RESPONSE} does on…

Q4. Keeping the electric system, including power lines and equipment, in good working order

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q5. Minimizing the number of power interruptions lasting LESS than one minute

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q6. In the past twelve months, how many times has there been a power interruption lasting LESS than one minute at this residence/business? {PROBE FOR BEST ESTIMATE}

[RECORD NUMBER OF TIMES 1-996]
0 No times/Did not lose power
997 997 times or more
998 (Don't know)
999 (Refused)

Q7. How would you rate the job that {RESTORE QN RESPONSE} does on minimizing the number of power outages lasting MORE than one minute?

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q8. In the past twelve months, how many times has there been a power outage lasting MORE than one minute at this residence/business? {PROBE FOR BEST ESTIMATE}

[RECORD NUMBER OF TIMES 1-996]
0 No times/Did not lose power
997 997 times or more
998 (Don't know)
999 (Refused)

{IF Q8=0, GO TO Q13}

Q9. When was … {if Q8=1, ask} this outage? … {IF Q8=2-997, ASK} your most recent outage? {TRANSLATE RESPONSE INTO NUMBER OF MONTHS}

[RECORD NUMBER OF MONTHS FROM 1-12]
0 No months
13 Over a year ago
14 (Don't know)
15 (Refused)

Q10. How long did this outage last?

[RECORD NUMBER OF DAYS FROM 1-96]
0 No days
97 97 or more days
98 (Don't know)
99 (Refused)

[RECORD NUMBER OF HOURS FROM 1-23]
0 No hours

[RECORD NUMBER OF MINUTES FROM 1-59]
0 No minutes

{IF Q8=2-997, ASK Q11-12 IF Q8=1, GO TO Q13}

Q11. How long was the SHORTEST of these outages over one minute? {the shortest of the outages of MORE THAN one minute}

[RECORD NUMBER OF DAYS FROM 1-96]
0 No days
97 97 or more days
98 (Don't know)
99 (Refused)

[RECORD NUMBER OF HOURS FROM 1-23]
0 No hours

[RECORD NUMBER OF MINUTES FROM 1-59]
0 No minutes

Q12. And how long did the LONGEST of these outages last?

[RECORD NUMBER OF DAYS FROM 1-96]
0 No days
97 97 or more days
98 (Don't know)
99 (Refused)

[RECORD NUMBER OF HOURS FROM 1-23]
0 No hours

[RECORD NUMBER OF MINUTES FROM 1-59]
0 No minutes

Q13. In the last twelve months, have you/has your business experienced any loss or damage due to electrical outages or other electrical problems?

1 Yes
2 No
3 (Don't know)
4 (Refused)

(If Q13=1, ask Q14. If Q 13=2, 3 or 4, skip to Q15)

Q14. What sort of loss of/damage to electrical equipment or accessories did you suffer?
{INTERVIEWER SHOULD NOT READ CHOICES AND SHOULD ACCEPT MULTIPLE RESPONSES.}

1 Loss of perishables
2 Loss of electrical equipment or accessories
3 Interruption of business
4 Injury to self or another person
5 Other
998 (Don't know)
999 (Refused)

Customer Service Performance

Once again I'd like you to rate {RESTORE QN RESPONSE}'s performance, using the same zero to ten scale, where a zero means a poor job and a ten means an excellent.

{RANDOMIZE Q15-Q17}

Q15. Restoring electric service at your residence/business when outages occur

[RECORD NUMBER 0-10]
11 (Don't know)

12 (Refused)

Q16. Providing information about extended outages

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q17. Being accessible during an outage

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q18. On a related topic, in the past 12 months, have you tried to reach {RESTORE QN RESPONSE} by phone?

1 Yes
2 No
3 (Don't know)
4 (Refused)

{IF Q18=1, ASK Q19; OTHERWISE GO TO INTRODUCTION BEFORE Q22}

Q19. What was the reason for your most recent call? {NOT READ - INTERVIEWER TO SELECT MOST APPROPRIATE CATEGORY}

1 To report a power problem, outage, or downed wire
2 To stop, start or transfer service
3 To make a payment arrangement or other billing question
4 To get information about locations, programs or services
5 (Other)
6 (Refused)

Q20. Did you complete your call through an automated telephone response system or speak to a live customer service representative or both? {Thinking about your most recent call.}

1 ATRS only
2 CSR only
3 Both
4 (Don't know)
5 (Refused)

{IF Q20=1, 2 or 3 ASK Q21; OTHERWISE GO TO Q22}

Q21. On a scale of zero to ten, {SHORTEN DESCRIPTION OF SCALE IF APPROPRIATE} where a zero means a poor job and a ten means an excellent job, please rate how well {RESTORE QN RESPONSE} met your needs during this phone call.

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Understanding of Services

Next, I'm going to read you a list of services that {RESTORE QN RESPONSE} may or may not provide. As I read each one, please tell me if you are very familiar, somewhat familiar or not at all familiar with {RESTORE QN RESPONSE} providing these services.

{RANDOMIZE Q22-Q25}

Q22. Has a toll-free number to report power outages. {Are you aware they provide this?}

1 Very familiar
2 Somewhat familiar
3 Not at all familiar
4 (Refused)

Q23. Is available 24 hours a day, 7 days a week by phone in the event of a power outage. {Are you aware they provide this?}

1 Very familiar
2 Somewhat familiar
3 Not at all familiar
4 (Refused)

Q24. Reports information about extended power outages to the news media to keep customers informed. {Are you aware they provide this?}

1 Very familiar
2 Somewhat familiar
3 Not at all familiar
4 (Refused)

Q25. Offers different bill payment options to qualified customers, such as paying a fixed monthly amount. {Are you aware they provide this?}

1 Very familiar
2 Somewhat familiar
3 Not at all familiar
4 (Refused)

Q26. Trims trees to reduce the occurrence of power outages. {Are you aware they provide this?}

1 Very familiar
2 Somewhat familiar
3 Not at all familiar
4 (Refused)

Tree Trimming Performance

{IF Q26=3 or 4, SKIP TO Q30} Now, I'd like to ask you to rate the tree trimming done by {RESTORE QN RESPONSE}. Please use the same zero-to-ten scale, {SHORTEN DESCRIPTION OF SCALE IF APPROPRIATE} where a zero means a poor job overall and a ten means an excellent job overall. How would you rate the job that {RESTORE QN RESPONSE} does on…

{RANDOMIZE Q27-Q29}

Q27. Trimming trees and clearing branches away from power lines to reduce the occurrence of power outages?

[RECORD NUMBER 0-10]
11 (Don't know)

12 (Refused)

Q28. Communicating the need for trimming trees?

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Q29. Trying hard to preserve the appearance of the trees they trim.

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Billing

Now I'd like to talk about your impressions of {RESTORE QN RESPONSE}'s billing.

Q30. (Do you/Does your business} receive a bill from {RESTORE QN RESPONSE} at this location?

1 Yes
2 No
3 (Don't know)
4 (Refused)

{IF Q30=1, ASK Q31; OTHERWISE GO TO INSTRUCTIONS BEFORE Q33}

Q31. Do you personally see or handle this bill?

1 Yes
2 No
3 (Don't know)
4 (Refused)

{IF Q31=1, ASK Q32; OTHERWISE GO TO INTRODUCTION BEFORE Q33}

Q32. Thinking about the bills that {you receive/your business receives} from {RESTORE QN RESPONSE}, using a zero-to-ten scale, how would you rate {RESTORE QN RESPONSE} on providing a bill that makes it easy to tell how much the current month's charges are?

[RECORD NUMBER 0-10]
11 (Don't know)
12 (Refused)

Demographics and Firmographics

Now, I'd like to ask you a few questions to help group your answers with those of others taking part in this survey.

{IF RESIDENTIAL PORTION, ASK Q33-Q37 and Q40. NON-RESIDENTIAL GO TO Q38.}

Q33. What year were you born?

[RECORD 1870 to current year minus 18]
1868 (Don't know)
1869 (Refused)

Q34. Do you own or rent your residence?

1 Own/Buying
2 Rent
3 (Don't know)
4 (Refused)

Q35. How many years have you lived at your current address?

[RECORD NUMBER OF YEARS FROM 1-99]
1 <1
2 (Don't know)
3 (Refused)

Q36. Into which of the following broad categories does your {STATE MOST RECENT TAX YEAR: 2018} total pre-tax household income from all sources fall? Would you say {READ CODES 1-4}?

1 Up to $25,000 {$24,999}
2 $25,000 to $50,000 {$49,999}
3 $50,000 to $75,000 {$74,999}
4 $75,000 or more
5 (Don't know)
6 (Refused)

Q37. Including yourself, how many people live in your household? {SELECT MOST APPROPRIATE CODE 1-7}

1 1
2 2
3 3
4 4
5 5 or more
6 (Don't know)
7 (Refused)

Q38. Including yourself, how many employees, both full and part time, do you employ at this location? {READ CODES 1-4}

1 1 to 4 employees
2 5 to 25 employees
3 26 to 100 employees
4 Over 100 employees
5 (Don't know)
6 (Refused)

Q39. How many years have you conducted business at this location?

[RECORD NUMBER OF YEARS FROM 1-99]
1 <1
2 (Don't know)
3 (Refused)

Q40. ENTER GENDER {BY OBSERVATION}

1 (Male)
2 (Female)
3 (Don't know)

Thank you for your time.

Appendix B. Explanation of Tables

Chi-Square Test

The chi-square test is used to measure the strength of association (or lack thereof) in two-way tables of frequencies. Stated somewhat differently, the chi-square test addresses the general issue of whether the distribution of one variable depends on the value of a second variable. It is particularly useful for exploring relationships among variables that take discrete values. While the chi-square test identifies whether or not a relationship exists it does not provide insight into the nature of the relationship. For example, in the table below, the chi-square indicates that the distribution of satisfaction scores differs by gender but it does not provide insight into whether males are more or less satisfied than females. The t-test of means and z-test of proportions / percentages (discussed on the pages which follow) provide additional insight into the relationships.

Chi-squares with a significance value of 0.05 or less are considered evidence against the hypothesis that changes in one variable are not associated with a change in the second variable. As shown in the example below, the significance of 0.0384 (which is less than the 0.05 threshold) indicates that reliable electric service ratings (Q2) vary by gender (Q40).

Example: Chi-Square Test

This example does not contain actual survey findings

Q2. (How would you rate the job that <utiln > does on....) Providing reliable electric service?

	Q40. Gender		
Frequency	(Male)	(Female)	Cross Tab Total
(A)	(B)	(C)	(D)
0 Poor	4	3	1	4
	0.7%	1.4%	0.3%	0.7%
1	-	-	-	-
2	3	-	3	3
	0.5%		0.8%	0.5%
3	5	1	4	5
	0.8%	0.5%	1.1%	0.8%
4	6	4	2	6
	1.0%	1.8%	0.5%	1.0%
5	41	12	29	41
	6.9%	5.5%	7.7%	6.9%
6	19	5	14	19
	3.2%	2.3%	3.7%	3.2%
7	43	17	26	43
	7.2%	7.7%	6.9%	7.2%
8	116	57	58	115
	19.4%	25.9%	15.4%	19.3%
9	97	35	62	97
	16.2%	15.9%	16.5%	16.3%
10 Excellent	263	86	177	263
	44.1%	39.1%	47.1%	44.1%
TOTAL NON-RESPONSES	3	2	1	3
	0.5%	0.9%	0.3%	0.5%
TOTAL ANSWERING	597	220	376	596
	100.0%	100.0%	100.0%	100.0%
CHI-SQUARE	<-------19.153------>			
SIGNIFICANCE	.0384*			

Significance is less than 0.05.

Reject hypothesis that males and females rate reliable electric service the same.

Comparison Groups: BC
"*" Denotes Chi-Square where at least one cell has an expected value of less than 1 or more than 20% of the cells have an expected value of less than 5.

T-test for Means

The t-test is used to test the hypothesis that two means are the same—for example, males and females. The use of a t-test assumes that the question of interest is measured on a continuous scale, for example responses to a satisfaction scale ranging from 0 meaning "poor" to 10 meaning "excellent." High values of a t-test at the 0.05 level of significance constitute evidence against the hypothesis that the two means are the same.

In the example table below, the upper case B (under column C) indicates that the t-test provides strong evidence against the hypothesis that the mean score for females as reported in column C (8.59) is the same as the mean score reported for males as reported in column B (8.45). In other words, the upper case B tells us that females provide higher reliable electric service ratings.

T-tests differ from the chi-square test discussed earlier. The chi-square test addresses the more general issue of whether the distribution of one variable depends on the value of a second variable, while the t-test focuses on the more specific issue of whether the mean or average value is different. The t-test provides additional insight into the observations. Chi-square tests are used to explore relationships among variables that take discrete values, while the t-test is used to explore relationships among variables measured on a continuous scale. While the chi-square test identifies that a relationship exists (e.g., the distribution of satisfaction scores is different depending on whether the respondent is male or female), the t-test facilitates an understanding of the nature of a relationship (e.g., mean satisfaction is higher for females than it is for males).

Example: T-Test for Means

This example does not contain actual survey findings

Q2. (How would you rate the job that <utiln > does on....) Providing reliable electric service?

	Q40. Gender			
	Frequency	(Male)	(Female)	Cross Tab Total
	(A)	(B)	(C)	(D)
MEAN	8.54	8.45	8.59 B	8.54

Reject hypothesis that male and female mean ratings of reliable electric service are the same. Females rate providing reliable electric service significantly higher.

Comparison Groups: BCD
Independent T-Test for Means, Independent Z-Test for Percentages
Upper case letters indicate significance at the 95% level.

Z-test for Proportions/Percentages

This test is used to test the hypothesis that an observed proportion is the same for two different groups. For example, the z-test for proportions is used to test the hypothesis that the proportion of respondents providing a specific score on a satisfaction scale ranging from 0 meaning "poor" to 10 meaning "excellent" is the same for two groups of people (say males and females). High values of the z-test for proportions at a 0.05 level of significance constitute evidence against the hypothesis that the proportions are the same.

In the example table below, the upper case C (under column B) indicates that the z-test provides strong evidence against the hypothesis that the percentage of males providing a score of "8" as reported in column B (25.9%) is the same as the percentage of females providing a score of "8" as reported in column C (15.4%). In other words, the upper case C tells us that a higher proportion of males rated reliable electric service an "8."

The z-test for proportions shares characteristics of both the chi-square test and the t-test for means. Like the chi-square test, the z-test for proportions is used to statistically examine relationships for variables that may not be measured on a continuous scale. Like the t-test for means, the z-test for proportions facilitates an understanding of the nature or direction of any differences.

Example: Z-Test for Proportions/Percentages

This example does not contain actual survey findings

Q2. (How would you rate the job that <utiln > does on....) Providing reliable electric service?

	Q40. Gender			
Frequency	(Male)	(Female)	Cross Tab Total
	(A)	(B)	(C)	(D)
0 Poor	4	3	1	4
	0.7%	1.4%	0.3%	0.7%
1	-	-	-	-
2	3	-	3	3
	0.5%		0.8%	0.5%
3	5	1	4	5
	0.8%	0.5%	1.1%	0.8%
4	6	4	2	6
	1.0%	1.8%	0.5%	1.0%
5	41	12	29	41
	6.9%	5.5%	7.7%	6.9%
6	19	5	14	19
	3.2%	2.3%	3.7%	3.2%
7	43	17	26	43
	7.2%	7.7%	6.9%	7.2%
8	116	57	58	115
	19.4%	25.9%	15.4%	19.3%
		C		
9	97	35	62	97
	16.2%	15.9%	16.5%	16.3%
10 Excellent	263	86	177	263
	44.1%	39.1%	47.1%	44.1%
TOTAL NON-RESPONSES	3	2	1	3
	0.5%	0.9%	0.3%	0.5%
TOTAL ANSWERING	597	220	376	596
	100.0%	100.0%	100.0%	100.0%

Reject hypothesis that the percentage of males and females providing a rating of "8" for reliable electric service are the same. A significantly higher percentage of males provided an "8" for reliable electric service.

Comparison Groups: BCD
Independent T-Test for Means, Independent Z-Test for Percentages
Upper case letters indicate significance at the 95% level.

Pearson Product Moment Correlation Coefficient

This test is used to determine the degree of linear relationship between two variables that are measured on continuous scales (e.g., responses to two questions both measured on a satisfaction scale ranging from 0 meaning "poor" to 10 meaning "excellent"). The value of the correlation coefficient statistic ranges from +1 to –1. A correlation of +1 means that there is a perfect positive linear relationship between two variables while a –1 indicates that there is a perfect negative linear relationship. A correlation coefficient of zero means there is no linear relationship between two variables. Correlation coefficients with an absolute value of 0.5 or higher are considered significant.

Year to Year Comparisons

Two statistical tests are used to determine "statistically" significant relationships between data from year to year. Significant relationships between 2019 and prior results for all rating questions are determined through the use of a standard independent t-test for means while significant relationships between 2019 and prior results for all yes/no and categorical questions are determined through the use of a standard independent z-test for percentages.

In this report, only "statistically" significant differences between 2019 and prior results are discussed. While many of these differences may not be large enough to be "meaningful" or "substantive" we, nevertheless, report them. The research team decided not to select a "substantive" significance level (which refers to an absolute difference between 2019 and prior results that must be achieved before a change is considered meaningful) because, while there is precedent for such a choice in customer satisfaction literature, setting a "substantive" significance level is fundamentally a subjective process. In order to keep the process completely objective, we have reported on all "statistically" significant differences. However, some of the "statistically" significant differences highlighted in this report (with respect to 2019 versus prior year comparisons) may not be meaningful because the absolute difference is small.

In the example table below, the upper case A (under column B) tells us that "providing reliable electric service" is rated "statistically" significantly higher in 2002 than in 2000. However the absolute difference between the mean scores for this attribute is 0.14. It could be reasonably argued that while this difference is "statistically" significant, it is not "meaningful" or "substantive."

Example: Year to Year Comparison

This example does not contain actual survey findings

Q2. (How would you rate the job that <utiln > does on....) Providing reliable electric service?

	2000	2001	2002
	(A)	(B)	(C)
MEAN	8.45	8.50	8.59
			A

Comparison Groups: ABC
Independent T-Test for Means, Independent Z-Test for Percentages
Upper case letters indicate significance at the 95% level.

Mean ratings for providing reliable electric service are "statistically" significantly higher in 2002 than in 2000. However the absolute difference between the two mean ratings is 0.14, which could be considered as not "meaningful" or "substantive."

Appendix C. Correlation Tables

Table 6. Correlation Coefficients for All Residential Rating Questions[1]

	Q1	Q2	Q3	Q4	Q5	Q7	Q15	Q16	Q17	Q21	Q27	Q28	Q29	Q32
Q1	–	.945	.558	.734	.412	.520	.502	.473	.543	.623	.348	.349	.363	.269
Q2		–	.543	.759	.472	.588	.522	.451	.520	.570	.384	.372	.357	.256
Q3			–	.420	.321	.499	.509	.474	.447	.461	.516	.307	.425	.421
Q4				–	.470	.592	.501	.645	.572	.593	.401	.383	.331	.213
Q5					–	.623	.362	.428	.441	.307	.220	.237	.111	-.016
Q7							.484	.531	.550	.393	.267	.293	.209	.195
Q15							–	.436	.493	.477	.260	.273	.471	.313
Q16								–	.827	.562	.475	.485	.459	.169
Q17									–	.466	.333	.399	.368	.259
Q21										–	.353	.380	.354	.350
Q27											–	.740	.630	.474
Q28												–	.648	.454
Q29													–	.484
Q32														–

[1] Correlation coefficients with an absolute value of 0.50 or higher are shaded in this table and addressed in the Residential Executive Summary.

Table 7. Correlation Coefficients for All Non-Residential Rating Questions[1]

	Q1	Q2	Q3	Q4	Q5	Q7	Q15	Q16	Q17	Q21	Q27	Q28	Q29	Q32
Q1	–	.802	-.159	.408	.314	.186	-.027	.292	-.216	-.380	-.089	-.038	-.298	-.295
Q2		–	-.186	.600	.531	.398	.085	.341	-.101	-.271	.048	.122	-.189	-.180
Q3			–	-.124	.517	.291	.891	.840	.839	.286	.588	.283	.656	.556
Q4				–	.288	.228	-.065	.065	-.198	-.388	.327	-.093	.353	-.335
Q5					–	.584	.700	.800	.736	.397	.251	.642	.169	.568
Q7						–	.535	.475	.362	-.057	.199	.254	.042	.000
Q15							–	.907	.895	.363	.653	.520	.552	.584
Q16								–	.783	.202	.483	.387	.398	.490
Q17									–	.697	.476	.724	.461	.859
Q21										–	.135	.864	.113	.928
Q27											–	.324	.905	.270
Q28												–	.152	.833
Q29													–	.268
Q32														–

[1] Correlation coefficients with an absolute value of 0.50 or higher are shaded in this table and addressed in the Non-Residential Executive Summary.

Appendix D. Residential Tables

Table 8. Residential Significant Chi-Squares[1]

	q6	q8	q9	q10	q11	q12	q13	q14	q18	q19	q20	q22	q23	q24	q25	q26	q30	q31	q33	q34	q35	q36	q37	q40
q1			X				X						X		X	X								
q2		X	X				X		X						X	X								
q3		X					X				X				X				X	X				
q4		X			X	X	X								X	X								
q5		X					X								X	X							X	
q6																					X		X	
q7	X	X											X		X	X				X		X		
q8																				X				
q9																								
q10																				X				
q11																					X			
q12																								X
q13																								
q14																								
q15		X	X				X					X	X			X								
q16	X	X			X		X				X		X	X	X			X						
q17	X	X			X								X			X								
q18																				X			X	
q19																					X			
q20																								X
q21					X		X						X		X	X				X				
q22																								
q23																				X				
q24																								
q25																								
q26																				X		X		
q27	X			X	X	X	X				X				X	X								
q28	X	X		X		X	X								X			X						X
q29	X			X		X	X								X	X								
q30																								
q31																								
q32	X		X				X					X	X			X								

[1] Shaded areas of the table represent cross-tabulations that were not performed pursuant to Illinois Administrative Code 411, "Electric Reliability." Boxes containing an "X" indicate a significant chi-square value for the cross-tabulation between the question in the row header and the question in the column header. Areas with significant findings are discussed in the Residential Executive Summary.

Appendix D

Required cross tabulations, statistical ranking tables, and t-test/z-test tables for all residential survey questions are available in electronic format. The file names are: Appendix D – Mt Carmel Residential Chi Square.doc and Appendix D – Mt Carmel Residential Z Test & T Test.doc, respectively.

Appendix E. Non-Residential Tables

Table 9. Non-Residential Significant Chi-Squares[1]

	q6	q8	q9	q10	q11	q12	q13	q14	q18	q19	q20	q22	q23	q24	q25	q26	q30	q31	q38	q39	q40
q1																X					
q2																X					
q3	X						X		X		X										
q4											X								X		X
q5	X	X																			
q6																					
q7							X							X							X
q8																					
q9																					
q10																					
q11																					
q12																					
q13																					X
q14																					
q15							X						X			X					
q16							X							X		X					
q17														X		X					
q18																					
q19																					
q20																					
q21											X										
q22																					
q23																					
q24																					
q25																					
q26																					
q27											X				X	X	X				X
q28														X	X	X	X				
q29									X			X									
q30																					
q31																				X	
q32							X						X	X	X						

[1] Shaded areas of the table represent cross-tabulations that were not performed pursuant to Illinois Administrative Code 411, "Electric Reliability." Boxes containing an "X" indicate a significant chi-square value for the cross-tabulation between the question in the row header and the question in the column header. Areas with significant findings are discussed in the Non-Residential Executive Summary.

Appendix E

Required cross tabulations, statistical ranking tables, and t-test/z-test tables for all non-residential survey questions are available in electronic format. The file names are: Appendix E – Mt Carmel Non-Residential Chi Square.doc and Appendix E – Mt Carmel Non-Residential Z Test & T Test.doc, respectively.

Appendix F. Year to Year Comparisons

Required cross tabulations comparing 2019 with prior results for all residential survey questions are available in electronic format. The file name is
Appendix F – Mt Carmel Residential Comparison 2015-2019.doc.

Required cross tabulations comparing 2019 with prior results for all non-residential survey questions are available in electronic format also. The file name is
Appendix F – Mt Carmel Non-Residential Comparison 2015-2019.doc.

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